

LBT-A17CDM/A27CDM D159CD/D209CD/D220CD

SERVICE MANUAL

US Model
D220CD
Canadian Model
D159CD
AEP Model
UK Model
D159CD/D209CD
E Model
A17CDM/A27CDM
Australian Model
A27CDM

These systems are composed of following models.
As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR THESE SYSTEM

	A17CDM	A27CDM		D159CD		D209CD	D220CD
	E	E	AUS	CND	AEP/UK	AEP/G/UK/EE	US
Compact disc deck	HTC-D159	HTC-D259		HTC-D159		HTC-D209	HTC-D159
Stereo FM•AM receiver	STR-A17	STR-A27		STR-D159		STR-D209	STR-D159
Turntable	—				PS-LX52P (Except for EE)		—
Speaker system	SS-D170				—		SS-D170

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

PARTS LIST

EE : East European model
CND: Canadian model
G : German model
AUS: Australian model

Parts No.	Description	Remarks	Parts No.	Description	Remarks
1-465-963-11	COMMANDER, STANDARD (RM-S271)	(A27CDM/D209CD)	* 4-956-902-01	CUSHION (LOWER) (D209CD)	
1-466-926-11	COMMANDER, STANDARD (RM-S109)	(A17CDM/D159CD/D220CD)	* 4-956-906-01	INDIVIDUAL, CARTON (D209CD:UK)	
1-501-374-11	ANTENNA, LOOP		* 4-957-208-01	CUSHION (SS-D170)	
1-501-536-11	ANTENNA (AEP)		* 4-957-529-01	INDIVIDUAL, CARTON (A17CDM)	
1-696-860-11	CORD, CONNECTION 13P		* 4-957-530-01	INDIVIDUAL, CARTON (D159:UK)	
2-181-754-01	COVER, BATTERY (RM-S109)		* 4-957-532-01	INDIVIDUAL, CARTON (A27CDM:AUS)	
* 3-376-136-01	CUSHION (HALF) (HTC-D159)		* 4-957-533-01	INDIVIDUAL, CARTON (D220CD)	
* 3-703-713-41	STICKER, SONY SYMBOL (10) (STR)		* 4-957-627-01	INDIVIDUAL, CARTON (D159:AEP)	
3-707-584-01	COVER, BATTERY (RM-S271)		* 4-957-628-01	INDIVIDUAL, CARTON (CND)	
3-756-330-11	MANUAL, INSTRUCTION (ENGLISH) (D159CD:UK)		* 4-957-629-01	INDIVIDUAL, CARTON (D209CD:AEP, G)	
3-756-330-21	MANUAL, INSTRUCTION (ENGLISH) (US, CND)		* 4-957-631-01	INDIVIDUAL, CARTON (A27CDM:E)	
3-756-330-31	MANUAL, INSTRUCTION (ENGLISH, F) (CND)		* 4-957-639-01	CUSHION (CND)	
3-756-330-41	MANUAL, INSTRUCTION (ENGLISH, F, E, P) (D159CD:AEP)		* 4-958-208-01	CUSHION (A17CDM, D159CD, D220CD)	
3-756-330-51	MANUAL, INSTRUCTION (D, NL, S, I) (D159CD:AEP)		* 4-958-549-01	CUSHION (A27CDM)	
3-756-330-71	MANUAL, INSTRUCTION (ENGLISH, F, E, RC) (A17CDM)		* 4-960-226-01	INDIVIDUAL, CARTON (D209CD:EE)	
3-756-331-11	MANUAL, INSTRUCTION (ENGLISH) (D209CD:UK)		A-4674-087-A	TURN TABLE MAT ASSY (PS-LX52P)	
3-756-331-41	MANUAL, INSTRUCTION (ENGLISH, F, E, P) (D209CD:AEP)		F: FRENCH	NL: DUTCH	E: SPANISH
3-756-331-51	MANUAL, INSTRUCTION (D, NL, S, I) (D209CD:AEP, G)		P: PORTUGUESE	I: ITALIAN	D: GERMAN
3-756-331-61	MANUAL, INSTRUCTION (ENGLISH, D, POLISH, RUSSIAN) (D209CD:EE)		S: SWEDISH	RC: CHINESE	
3-756-331-71	MANUAL, INSTRUCTION (ENGLISH, F, E, RC) (A27CDM)				
4-937-945-01	PLATE (TRANSPORT), LOCK (HTC-D159/D259)				
* 4-947-532-01	SNOW BOX (L) (PS-LX52P)				
* 4-947-533-01	SNOW BOX (R) (PS-LX52P)				
* 4-956-900-01	CUSHION (UPPER) (D209CD)				
* 4-956-901-01	CUSHION (MIDDLE) (D209CD)				

COMPACT HI-FI
STEREO SYSTEM
SONY®

STR-A27/D209/D259

SERVICE MANUAL

STR-A27, STR-D209 and STR-259 are the tuner and amplifier section in LBT-A27CDM, LBT-D209CD and LBT-D259CD respectively.



PHOTO: STR - D259

Canadian Model
STR-D259

AEP Model

UK Model

STR-D209/D259

E Model

Australian Model

STR-A27

SPECIFICATIONS

Stereo FM-AM receiver

Tuner

System

FM stereo
FM/AM superheterodyne tuner

FM tuner section

Tuning range

87.5 to 108 MHz (EXCEPT EE)
65.0 to 74.0 MHz (EE)

Antenna

75 ohms unbalanced

Intermediate frequency

10.7 MHz

AM tuner section

Tuning range

MW: 530 to 1710 kHz (Canadian model)
522 to 1611 kHz (Italian model)
531 to 1602 kHz (9 kHz step)
531 to 1710 kHz (10 kHz step) } (E model)
531 to 1602 kHz (Other models)

LW: 153 to 279 kHz

SW: 5.95 to 17.90 kHz (Mideasten model)

Antenna

AM loop antenna
External antenna terminal

Intermediate frequency

450 kHz

Amplifier

DIN power output

30 W + 30 W (6 ohms, at 1 kHz)

Continuous RMS power output

35 W + 35 W (6 ohms, at 1 kHz, 5% THD)

Music power output

60 W + 60 W (6 ohms)

Input	Jack type	Sensitivity	Impedance
VIDEO IN	Phono	300 mV	47 kohms
PHONO IN	Phono	3 mV	47 kohms

Output	Jack type	Impedance
SURROUND SPEAKER	Phono	Accepts speakers of 16 ohms
HEADPHONES	Stereophone	Accepts headphones of 8 ohms or more

Frequency response

VIDEO: 15 Hz to 50 kHz $+0$ -3 dB

General

Power requirements

220 - 230 V AC, 50/60 Hz (AEP, IT, EE, G)
120 V AC, 60 Hz (CND)
240 V-AC, 50 Hz (UK)
110 - 120 V/220 - 240 V-AC,

Power consumption

50 Hz/60 Hz (E, AUS)
100 W (AEP, AE2, IT, EE, G, UK)
115 W (CND)
170 W (E, AUS, AU2)

Mass

Approx. 5.9 kg

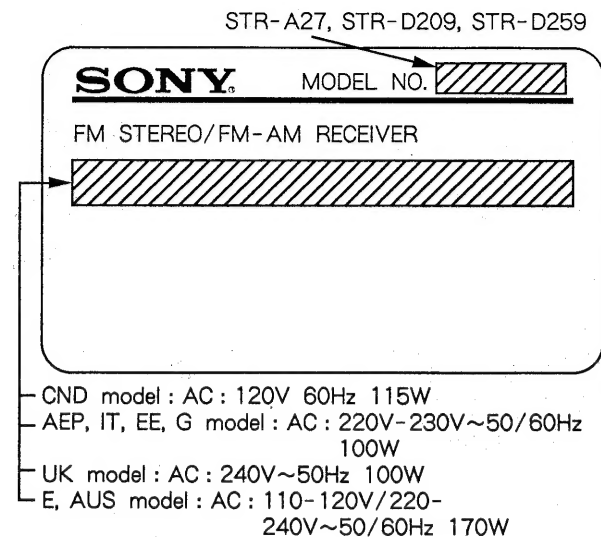
Dimensions

Approx. 355 × 225 × 330 mm
(w/h/d, including projections)

STEREO FM-AM RECEIVER
SONY®

— MODEL IDENTIFICATION —

(Specification Label)



Note : CND : Canadian model
 G : German
 IT : Italian model
 EE : East European model
 AUS, AU2 : Australian model

• CAUTION

Be sure to use insulation sheet (A4-959-364-01) when replacing power transformer because it is safely related part.

SAFETY-RELATED COMPONENT WARNING!!




COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		3
2. DISASSEMBLY		
2-1.	Front Panel	4
2-2.	Panel Board	4
2-3.	Amplifier Board	5
2-4.	Main/Tuner Board	5
3. ADJUSTMENT		6
4. DIAGRAMS		
4-1.	Schematic Diagram — Tuner Section —	7
4-2.	Printed Wiring Board — Main Section —	11
4-3.	Schematic Diagram — Main Section —	15
4-4.	Schematic Diagram — Display Section —	19
4-5.	Printed Wiring Board — Display Section —	23
4-6.	Circuit Boards Location	26
4-7.	Semiconductor Lead Layouts	26
5. EXPLODED VIEWS		
5-1.	Front Section	27
5-2.	Back Panel Section	29
6. ELECTRICAL PARTS LIST		30

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

This section is extracted from instruction manual.

Location of Controls

Refer to the pages indicated in parentheses for details.

Tuner

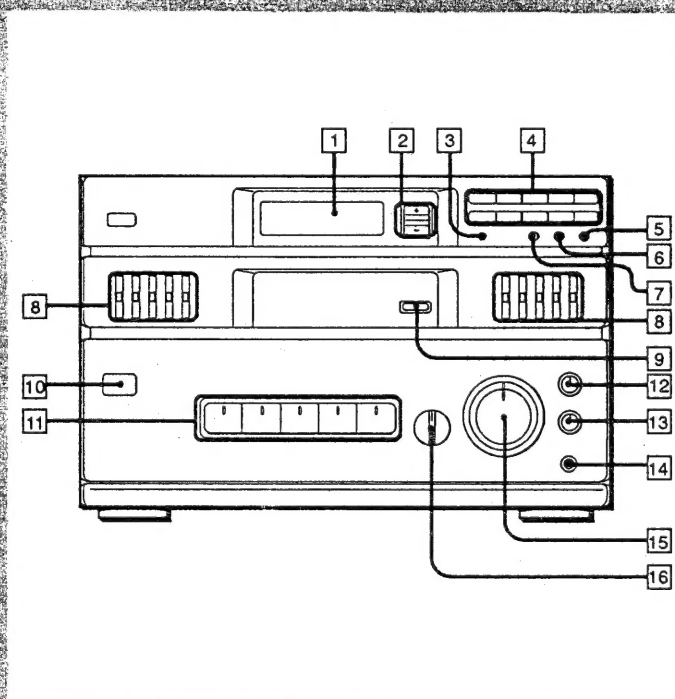
- 1 Display window
- 2 DUAL MODE TUNING + / - buttons (20, 22)
- 3 MEMORY button (22)
- 4 Numeric buttons (22)
- 5 SHIFT button (22)
- 6 BAND SELECT button (20)
- 7 ST/MUTE button (20, 22)

Graphic Equalizer

- 8 5 BAND GRAPHIC EQUALIZER controls (16)
- 9 EQUALIZER switch (16)

Amplifier

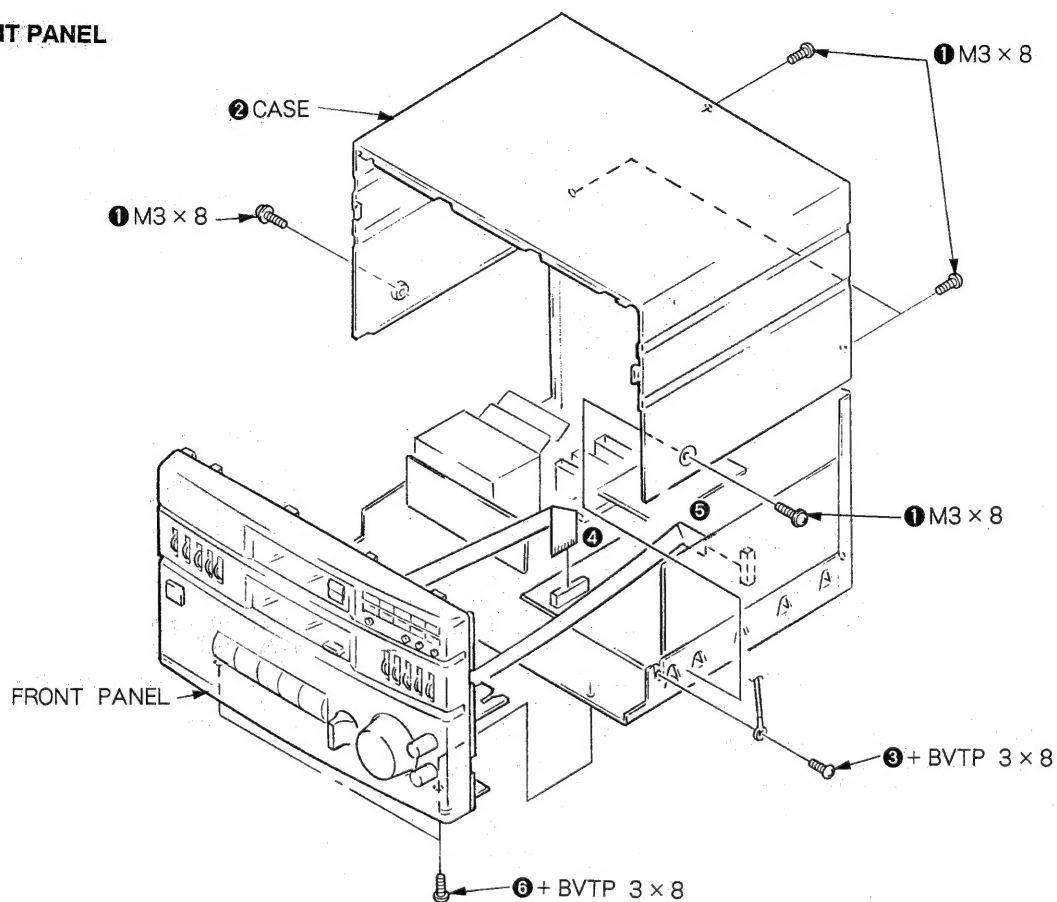
- 10 SYSTEM POWER button (14)
- 11 Function selectors and indicators (VIDEO/TAPE/CD/TUNER/PHONO)
- 12 BALANCE control (16)
- 13 SURROUND control (16)
- 14 HEADPHONES jack
- 15 VOLUME control and indicator (16)
- 16 DBFB (dynamic bass feedback) control (16)



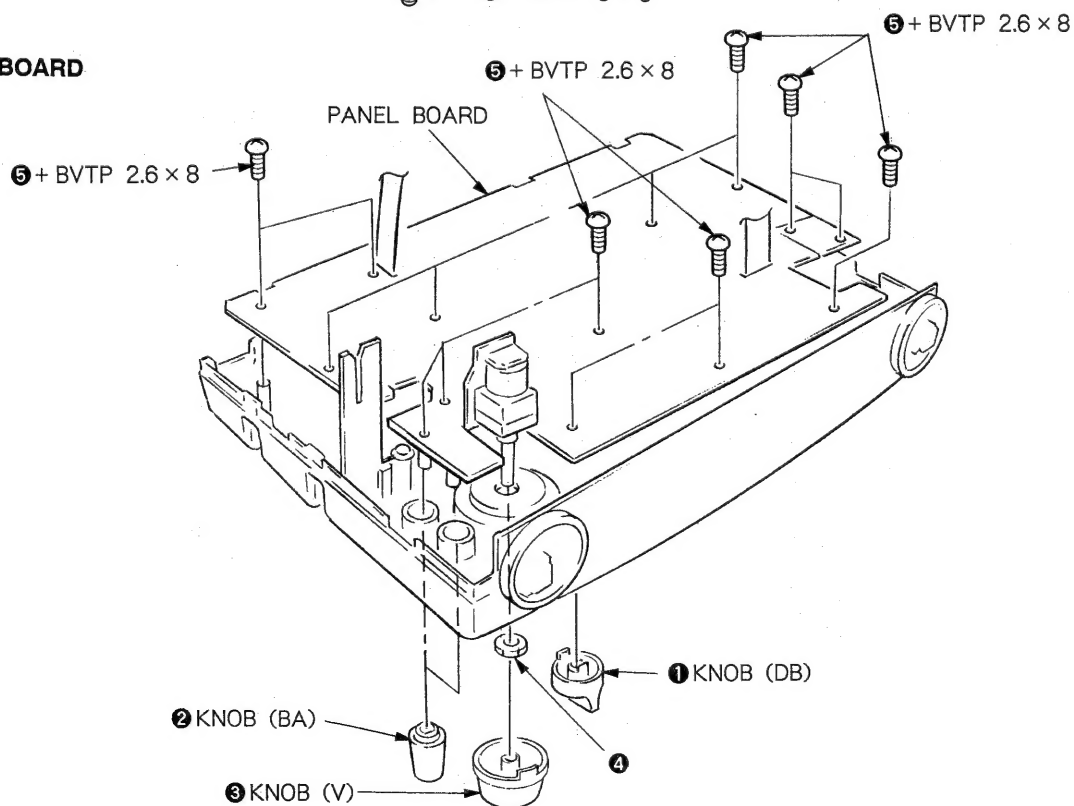
SECTION 2 DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

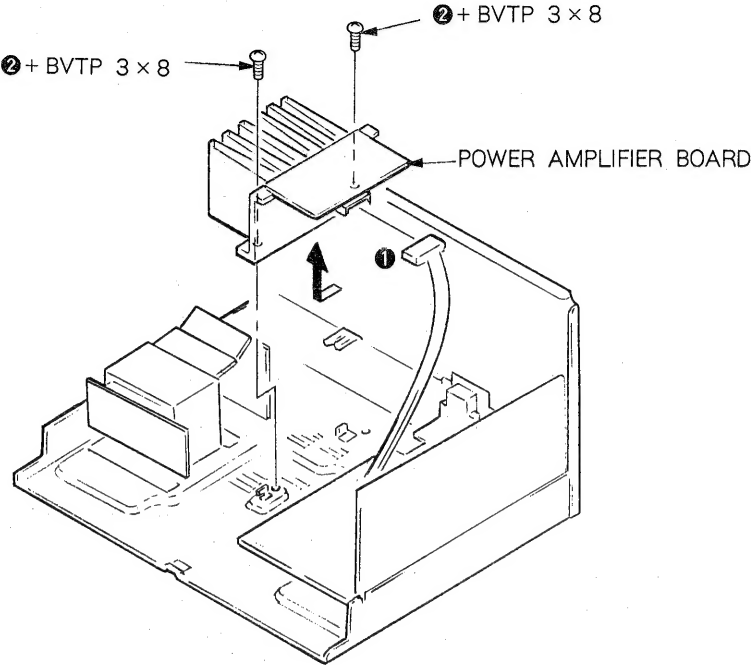
2-1. FRONT PANEL



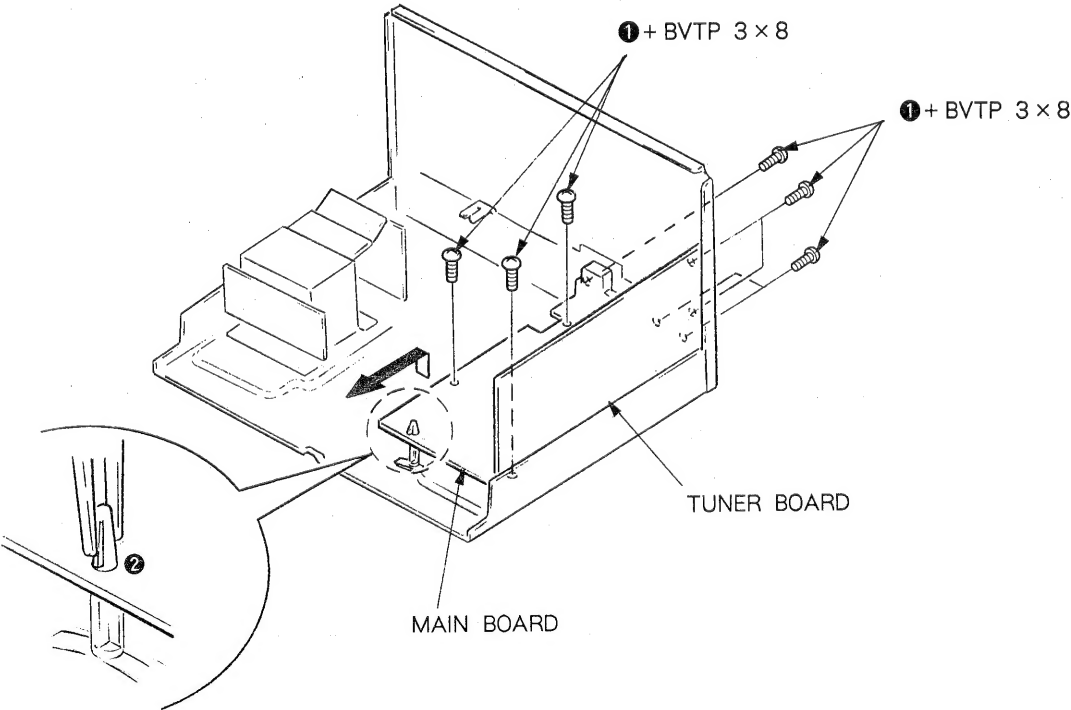
2-2. PANEL BOARD



2-3. POWER AMPLIFIER BOARD



2-4. MAIN /TUNER BOARD



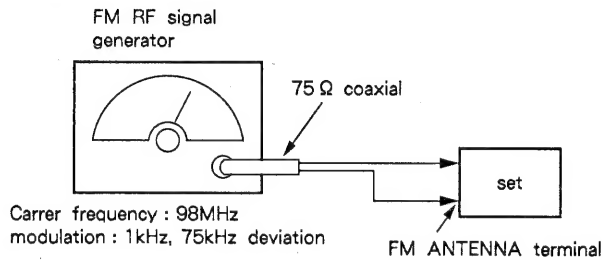
SECTION 3 ADJUSTMENTS

Note: As a front-end (FE301) is difficult to repair if faulty, replace it with new one.

TUNER SECTION

FM SECTION ADJUSTMENTS

Setting :



• TUNER OUT CHECK POINT

Speaker out receive 98MHz 60dB μ (1mV) and set the SPEAKER out to 10dBs by VOLUME.

Speaker load : 6 Ω both CH

FM NULL Adjustment

Procedure :

1. Supply a 60dB μ (1mV) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust T301 for 0V reading on the measurement point.

FM Tuned Indication Lighting Level Adjustment

Band : FM

ST/MUTE SW : OFF

Procedure :

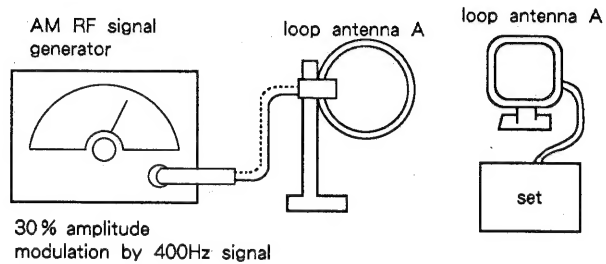
1. Supply a $24 \pm 1 \mu V$ ($20 \pm 4dB\mu$ (EE)) ($25 \pm 4dB\mu$ (EXCEPT EE)) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV302 so that the FL601 **TUNED** light up.

Adjustment Location: main board

- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by trimmer capacitors.

AM SECTION ADJUSTMENT

Setting :



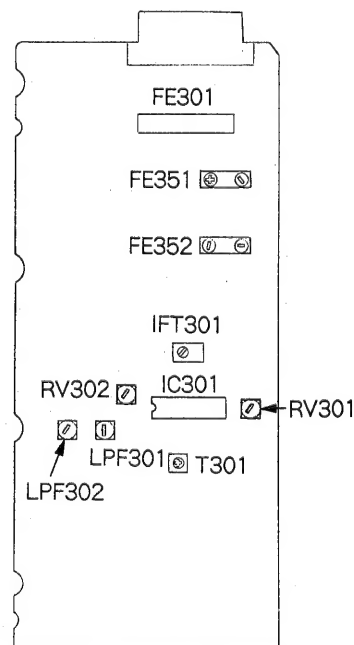
AM Tuned Indication Lighting Level Adjustment

Band : AM

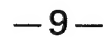
Procedure :

1. Set loop antenna input level to 94dB μ /m, 1050 kHz and no signal tuned light should not on.
2. Tune the set to 1050kHz
3. Adjust RV301 so that the FL601 **TUNED** light up.

Adjustment Location: tuner board



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----



Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D351 (B)	E-6	IC1306	C-12
D1201	E-15	IC1601	J-19
D1202	E-15		
D1203	E-15	Q301 (E)	D-3
D1204	G-15	Q302 (E)	D-3
D1205	C-14	Q303 (E)	E-3
D1251	G-19	Q303 (B)	E-7
D1302	E-12	Q304 (E)	E-3
D1303	E-12	Q304 (B)	E-7
D1304	E-12	Q305 (E)	I-3
D1305	E-13	Q305 (B)	I-7
D1306	E-13	Q306 (E)	I-3
D1307	J-23	Q306 (B)	I-7
D1309	I-23	Q307 (E)	H-4
D1311	I-24	Q307 (B)	H-9
D1316	H-12	Q308 (E)	H-4
D1317	J-12	Q308 (B)	H-8
D1318	D-13	Q309 (E)	H-4
D1319	D-14	Q309 (B)	H-9
D1321	B-27	Q351 (B)	D-7
D1322	C-27	Q352 (B)	D-7
D1323	E-13	Q353 (B)	E-7
D1324	E-13	Q354 (B)	E-7
D1341	I-14	Q355 (B)	E-7
D1345	I-13	Q356 (B)	E-7
D1347	J-16	Q501 (E)	F-1
D1354	B-25	Q501 (B)	F-6
D1355	B-25	Q502 (E)	F-1
D1368	D-14	Q502 (B)	F-6
D1369	D-13	Q521 (E)	C-4
D1370	J-24	Q521 (B)	C-9
		Q522 (E)	B-4
IC301 (E)	G-2	Q522 (B)	B-9
IC301 (B)	G-7	Q531 (B)	D-8
IC501 (E)	E-4	Q532 (B)	C-9
IC501 (B)	E-9	Q1201	E-19
IC1001	D-11	Q1202	H-18
IC1002	G-11	Q1203	H-18
IC1003	I-11	Q1204	H-15
IC1201	F-20	Q1251	G-19
IC1202	F-15	Q1301	J-23
IC1302	J-12	Q1302	J-13
IC1303	I-14	Q1304	I-15
IC1304	H-13	Q1305	I-15
IC1305	H-14		

(B) : ★ B

(E) : EXCEPT ★ B

Note on Mounting Diagram :

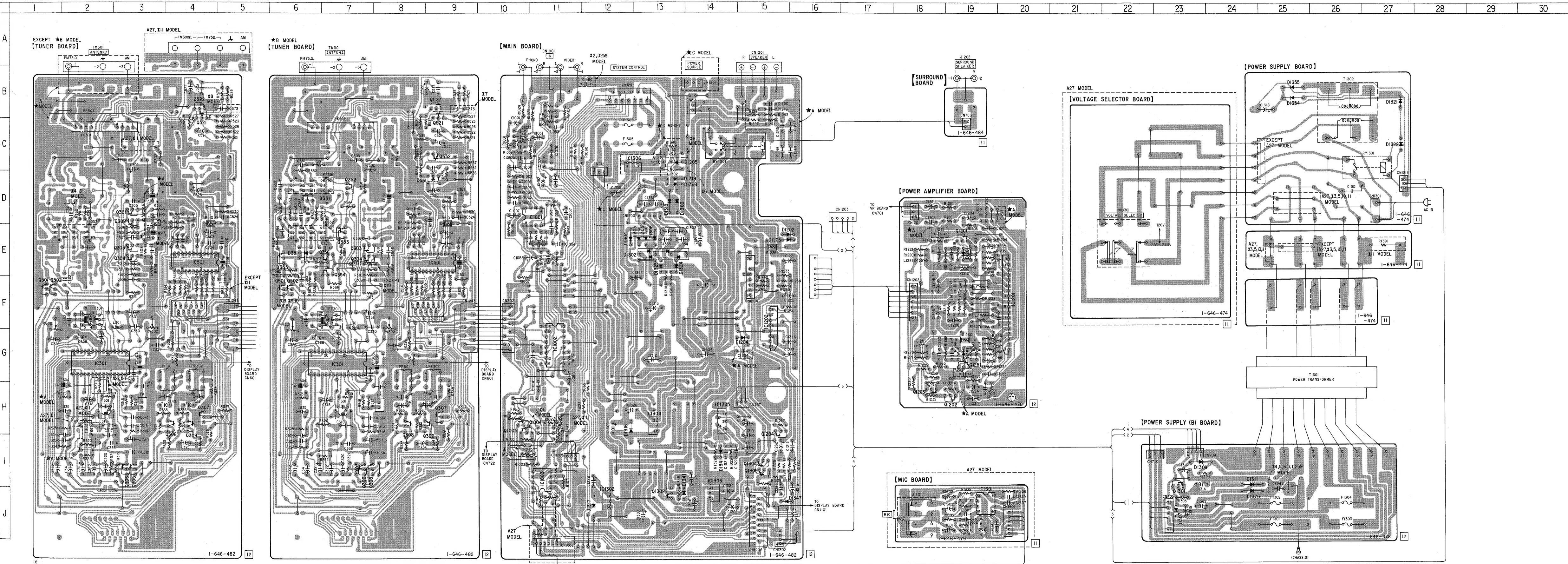
- : Parts extracted from the component side.
- : Pattern on the side which is seen.

Model name and destination shown by * 1 to * 11.

- * 1 : A27 : Australian
- * 2 : A27 : E, AU2
- * 3 : D209 : UK
- * 4 : D209 : Italian
- * 5 : D209 : East European
- * 6 : D209 : German
- * 7 : D209 : AEP, AE2
- * 8 : D259 : Italian
- * 9 : D259 : AEP, AE2
- * 10 : D259 : UK
- * 11 : D259 : Canadian
- ★ A : * 4, 6, 8
- ★ B : * 3, 5, 7, 9, 10
- ★ C : 209 : AEP, * 3, 6, D259 : AEP, * 10

AU2 : AUS (with in PHONO MODEL)
AE2 : AEP (with in PHONO MODEL)

4-2. PRINTED WIRING BOARD — MAIN SECTION —



4-3. SCHEMATIC DIAGRAM — MAIN SECTION —

Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF: μpF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and K or M or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.

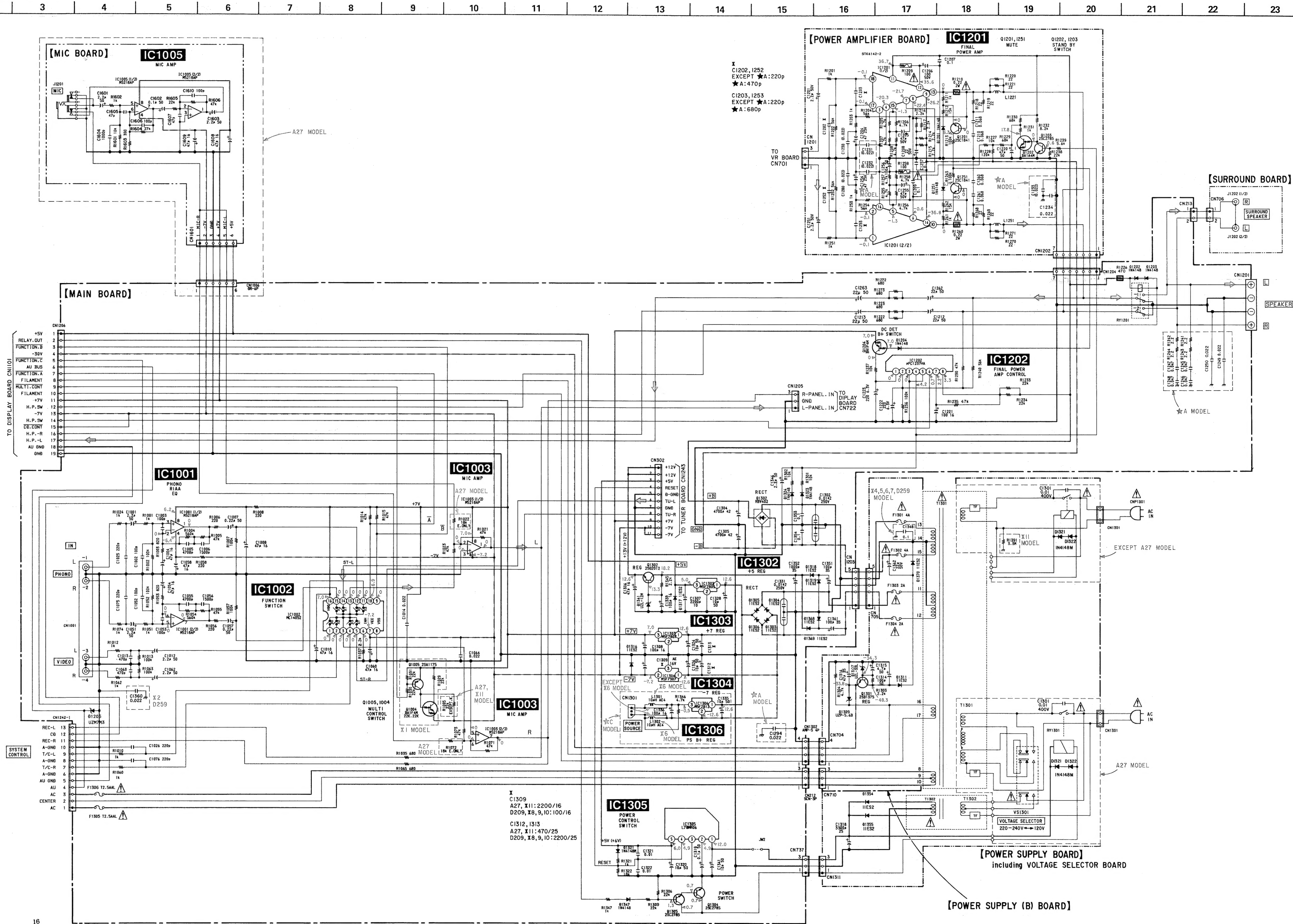
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

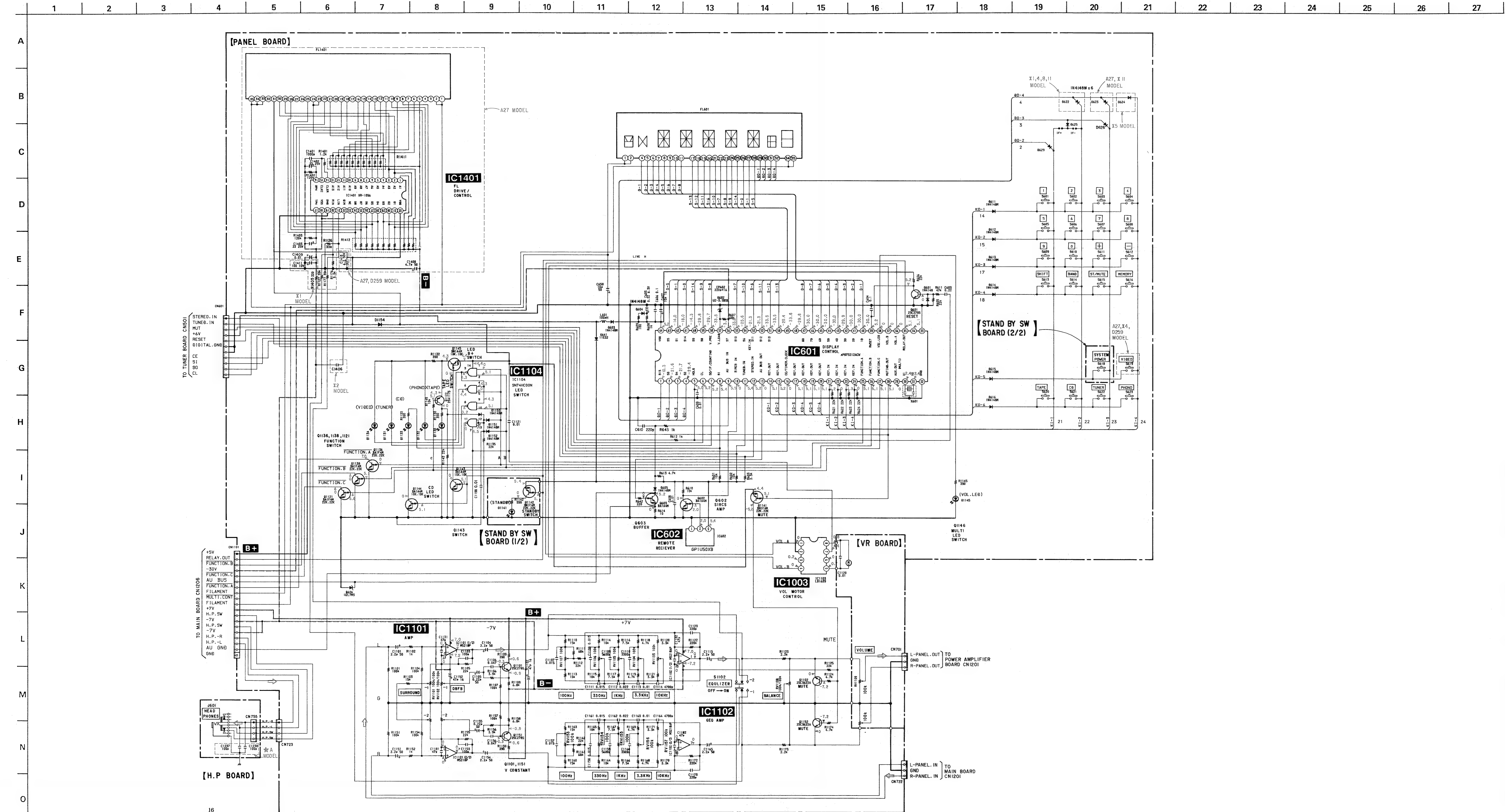
- : adjustment for repair.
- : B+ Line.
- : B- Line.
- no mark : FM
- Voltages are taken with a VOM (input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path:
 - : FM
 - : AM

- Model name and destination shown by *1 to *11.
- *1: A27: Australian
- *2: A27: E, AU2
- *3: D209: UK
- *4: D209: Italian
- *5: D209: East European
- *6: D209: German
- *7: D209: AEP, AE2
- *8: D259: Italian
- *9: D259: AEP, AE2
- *10: D259: UK
- *11: D259: Canadian
- ★A: *4, 6, 8
- ★B: *3, 5, 7, 9, 10
- ★C: 209: AEP, *3, 6, D259: AEP, *10

AU2: AUS (with in PHONO MODEL)
AE2: AEP (with in PHONO MODEL)



4-4. SCHEMATIC DIAGRAM — DISPLAY SECTION —



Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{2}$ W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.

Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : adjustment for repair.
- : B + Line.
- : B - Line.
- no mark : FM
- Voltages are taken with a VOM (input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 - : FM
 - : AM

- Model name and destination shown by * 1 to * 11.
- * 1 : A27 : Australian
- * 2 : A27 : E, AU2
- * 3 : D209 : UK
- * 4 : D209 : Italian
- * 5 : D209 : East European
- * 6 : D209 : German
- * 7 : D209 : AEP, AE2
- * 8 : D259 : Italian
- * 9 : D259 : AEP, AE2
- * 10 : D259 : UK
- * 11 : D259 : Canadian
- * A : * 4, 6, 8
- * B : * 3, 5, 7, 9, 10
- * C : 209 : AEP, * 3, 6, D259 : AEP, * 10

AU2 : AUS (with in PHONO MODEL)
AE2 : AEP (with in PHONO MODEL)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
--	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----

Ref. No.	Location	Ref. No.	Location
----------	----------	----------	----------

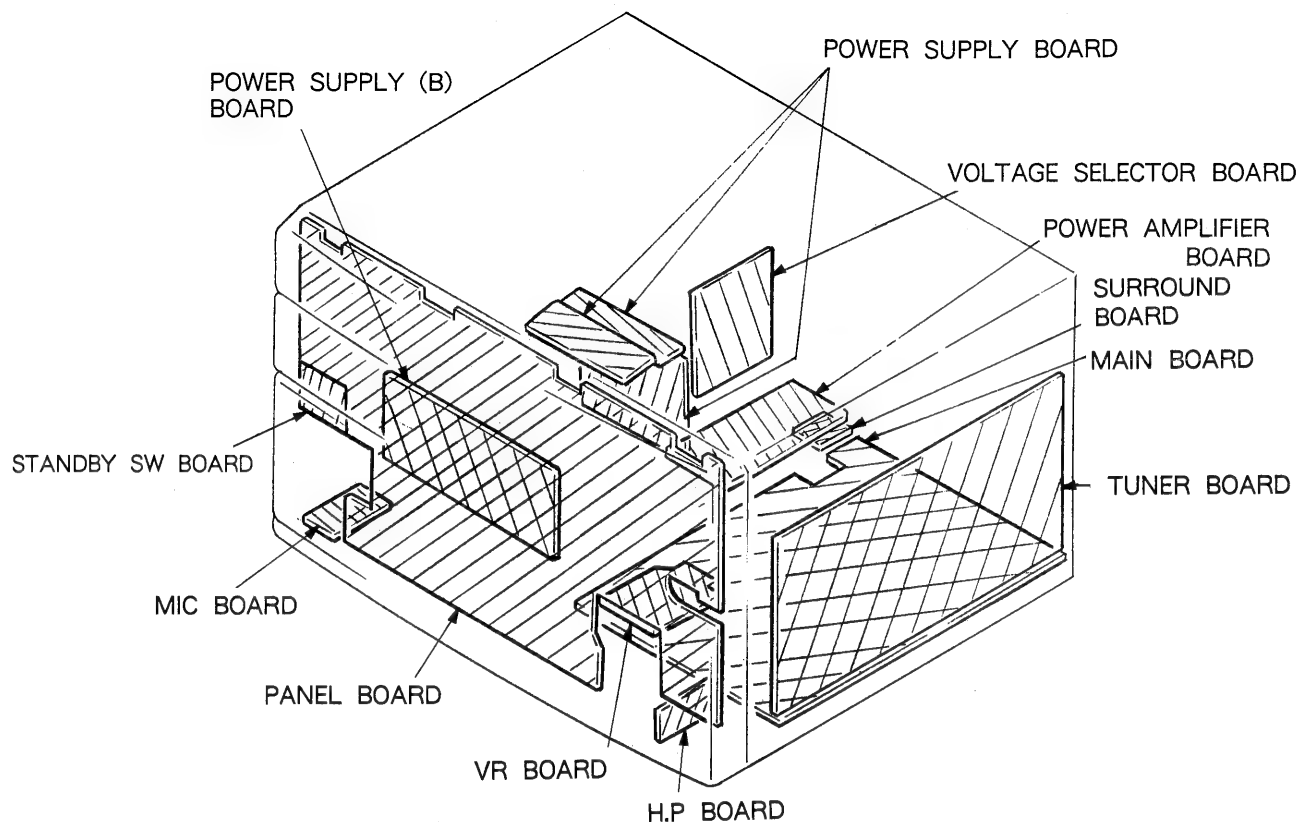
--	--	--	--	--

• **Component**: Parts extracted from the component

- * Model name and destination shown by * 1 to * 11

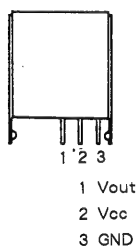
AII2 : AII5 (with in PHONO MODEL)

4-6. CIRCUIT BOARDS LOCATION

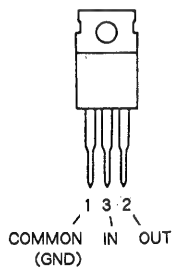


4-7. SEMICONDUCTOR LEAD LAYOUTS

GP1U50XB



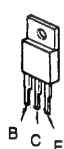
M5F79M07



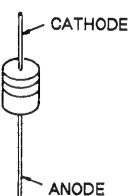
DTA114ES
DTC114ES
DTC124ES
2SC2603-EF
2SC2669-0Y
2SC3622A-LK



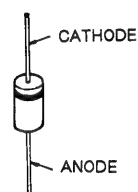
2SA473
2SD2012



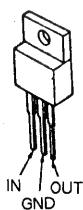
HZS7B3L
UZL-12M3
UZL-33L
UZL-5.8B
UZ-3.9BSB
11ES2



1N4148M



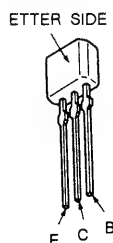
M5F7805
M5F7807L
M5F7812L



L78MR06
4.8 MAX



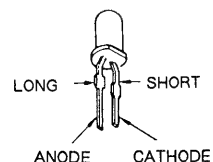
DTA124ES
2SA1175-HFE
2SC2785-HFE



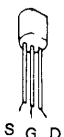
2SC1841-PAFAEA
2SC3112-B



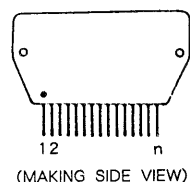
SEL2210S-CD
SEL3210S-CD



2SK246-GR3



STK-4142MK2



SECTION 5 EXPLODED VIEWS

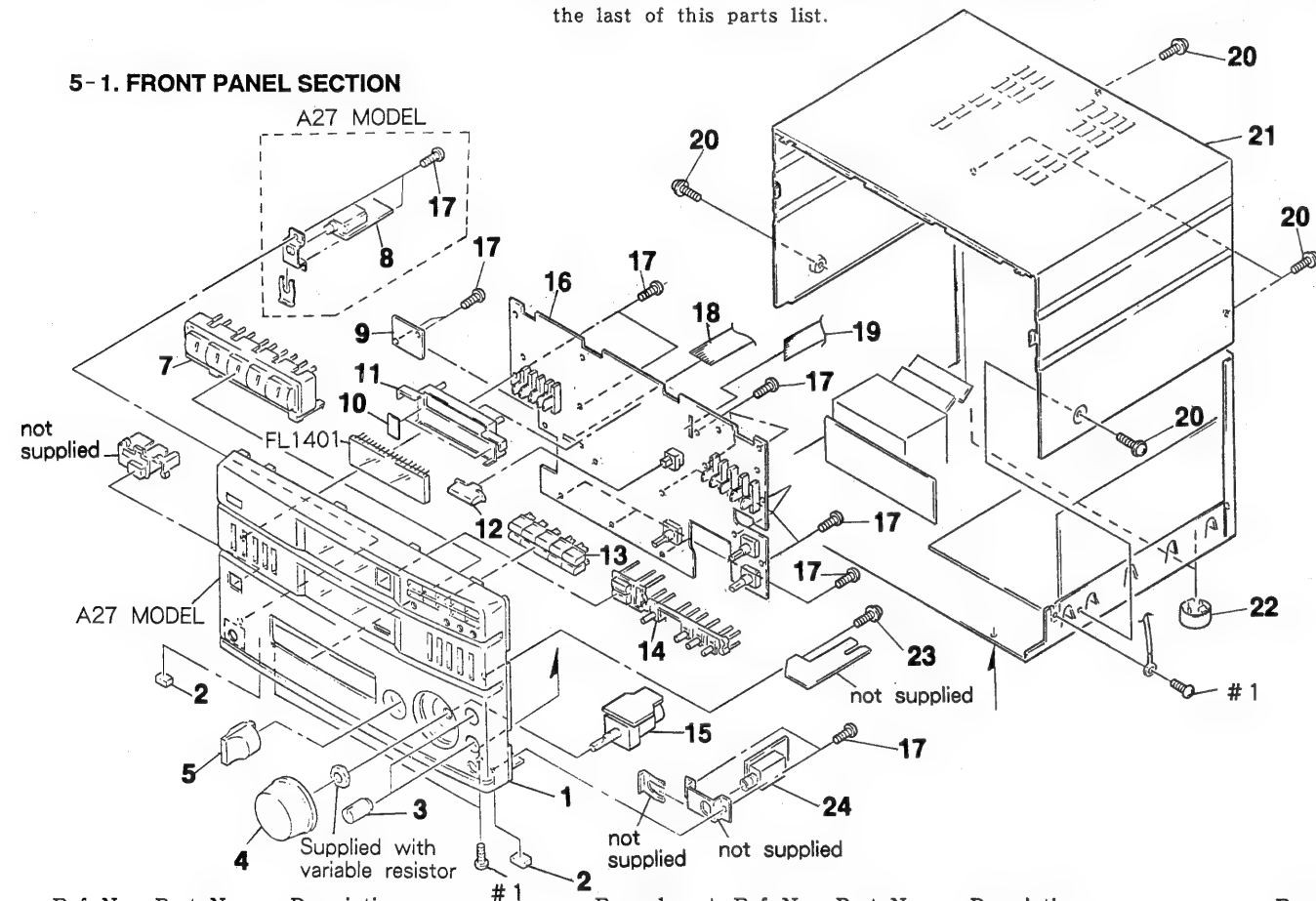
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE)...(RED)
Parts color Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

- Model name and destination shown by *1 to *11.
*1: A27: Australian
*2: A27: E, AU2
*3: D209: UK
*4: D209: Italian
*5: D209: East European
*6: D209: German
*7: D209: AEP, AE2
*8: D259: Italian
*9: D259: AEP, AE2
*10: D259: UK
*11: D259: Canadian
★A: *4, 6, 8
★B: *3, 5, 7, 9, 10
★C: 209: AEP, *3, 6, D259: AEP, *10
AU2: AUS (with in PHONO MODEL)
AE2: AEP (with in PHONO MODEL)

5-1. FRONT PANEL SECTION

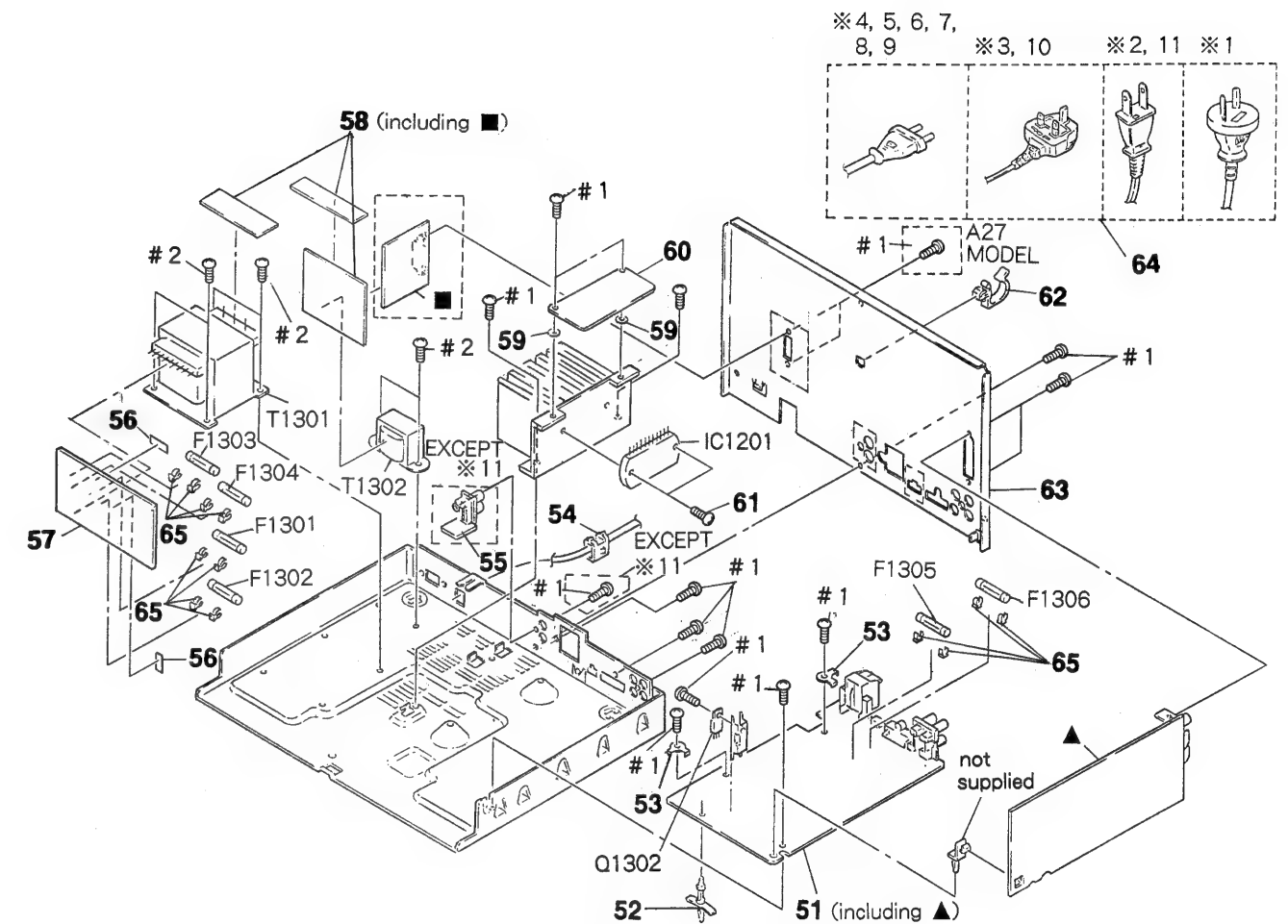


Ref. No.	Part No.	Description	Remarks
1	X-4943-180-1	PANEL ASSY, FRONT (*1)	
1	X-4943-182-1	PANEL ASSY, FRONT (D209)	
1	X-4943-242-2	PANEL ASSY, FRONT (*2)	
1	X-4943-243-2	PANEL ASSY, FRONT (D259)	
2	4-948-236-01	CUSHION (107)	
3	4-955-744-01	KNOB (BA) (*1, D209)	
3	4-955-744-21	KNOB (BA) (*2, D259)	
4	4-955-635-01	KNOB (V) (*1, D209)	
4	4-955-635-21	KNOB (V) (*2, D259)	
5	4-955-636-01	KNOB (DB) (*1, D209)	
5	4-955-636-22	KNOB (DB) (*2, D259)	
7	X-4943-179-1	BUTTON (FU) ASSY	
* 8	1-646-479-11	MIC BOARD (A27)	
* 9	1-646-480-11	STAND-BY SW BOARD	
* 10	4-949-935-31	CUSHION (FL)	
* 11	4-942-301-01	HOLDER, FL TUBE	
12	4-955-755-01	BUTTON (EQ) (*1, D209)	
12	4-955-755-11	BUTTON (EQ) (*2, D259)	
13	4-955-741-01	BUTTON (PR) (*1, D209)	
13	4-955-741-21	BUTTON (PR) (*2, D259)	
14	4-955-745-01	BUTTON (ST)	
* 15	1-646-497-11	VR BOARD	
* 16	A-4356-640-A	PANEL BOARD, COMPLETE (*1)	

Ref. No.	Part No.	Description	Remarks
* 16	A-4356-736-A	PANEL BOARD, COMPLETE (*2)	
* 16	A-4356-623-A	PANEL BOARD, COMPLETE (*3)	
* 16	A-4356-930-A	PANEL BOARD, COMPLETE (*4)	
* 16	A-4360-822-A	PANEL BOARD, COMPLETE (*5)	
* 16	A-4356-924-A	PANEL BOARD, COMPLETE (*6)	
* 16	A-4356-608-A	PANEL BOARD, COMPLETE (*7)	
* 16	A-4360-541-A	PANEL BOARD, COMPLETE (*8)	
* 16	A-4360-531-A	PANEL BOARD, COMPLETE (*9)	
* 16	A-4360-520-A	PANEL BOARD, COMPLETE (*10)	
* 16	A-4360-509-A	PANEL BOARD, COMPLETE (*11)	
17	4-951-620-01	SCREW (2.6X8), +BVTP	
18	1-590-578-11	WIRE, FLAT TYPE (19 CORE)	
19	1-590-576-11	WIRE, FLAT TYPE (11 CORE) (A27, D259)	
19	1-590-576-21	WIRE, FLAT TYPE (11 CORE) (D209)	
20	3-704-366-01	SCREW (CASE) (M3X8)	
* 21	4-955-759-11	CASE (*1, D209)	
* 21	4-955-759-51	CASE (*2, D259)	
22	4-933-601-01	FOOT (*2, D259)	
22	X-4941-228-1	FOOT ASSY (*1, D209)	
23	4-957-577-01	SCREW PTP WH (2.6X8) (DIA. 10) (*1, D209)	
23	4-957-577-11	SCREW PTP WH (2.6X8) (DIA. 10) (*2, D259)	
* 24	1-646-477-11	H. P. BOARD	
	FL1401	1-519-648-21	INDUCTOR TUBE, FLUORESCENT (A27)

5-2. BACK PANEL SECTION

- ▲: TUNER BOARD
- : VOLTAGE SELECTOR BOARD



• CAUTION

Be sure to use insulation sheet (▲4-959-364-01) when replacing power transformer because it is safely related part.

Ref. No.	Part No.	Description	Remarks
* 51	A-4356-650-A	MAIN BOARD, COMPLETE (*1)	
* 51	A-4356-742-A	MAIN BOARD, COMPLETE (*2)	
* 51	A-4356-630-A	MAIN BOARD, COMPLETE (*3)	
* 51	A-4356-933-A	MAIN BOARD, COMPLETE (*4)	
* 51	A-4360-821-A	MAIN BOARD, COMPLETE (*5)	
* 51	A-4356-926-A	MAIN BOARD, COMPLETE (*6)	
* 51	A-4356-618-A	MAIN BOARD, COMPLETE (D209:AEP)	
* 51	A-4356-928-A	MAIN BOARD, COMPLETE (D209:AE2)	
* 51	A-4360-543-A	MAIN BOARD, COMPLETE (*8)	
* 51	A-4360-534-A	MAIN BOARD, COMPLETE (D259:AEP)	
* 51	A-4360-538-A	MAIN BOARD, COMPLETE (D259:AE2)	
* 51	A-4360-523-A	MAIN BOARD, COMPLETE (*10)	
* 51	A-4360-511-A	MAIN BOARD, COMPLETE (*11)	
* 52	4-954-051-51	HOLDER, PC BOARD	
* 53	4-942-204-01	PLATE, GROUND	
* 54	3-703-244-00	BUSHING (2104), CORD (EXCEOT A27:E)	
* 54	3-703-571-11	BUSHING (S) (4516), CORD (A27:E)	
* 55	1-646-484-11	SURROUND BOARD (EXCEPT *11)	
* 56	3-701-946-26	LABEL (4A125V), FUSE (*11)	
* 57	1-646-478-11	POWER SUPPLY (B) BOARD	
* 58	1-646-474-11	POWER SUPPLY BOARD	
59	3-330-034-01	WASHER (*2, D259)	
59	3-564-542-00	WASHER, FIBER (D209)	
* 60	A-4356-649-A	POWER AMPLIFIER BOARD, COMPLETE (*1)	
* 60	A-4356-749-A	POWER AMPLIFIER BOARD, COMPLETE (*2)	
* 60	A-4356-628-A	POWER AMPLIFIER BOARD, COMPLETE (*3)	
* 60	A-4356-935-A	POWER AMPLIFIER BOARD, COMPLETE (*4, 6)	
* 60	A-4356-616-A	POWER AMPLIFIER BOARD, COMPLETE (*5, 7)	
* 60	A-4360-546-A	POWER AMPLIFIER BOARD, COMPLETE (*8)	
* 60	A-4360-537-A	POWER AMPLIFIER BOARD, COMPLETE (*9)	
* 60	A-4360-527-A	POWER AMPLIFIER BOARD, COMPLETE (*10)	
* 60	A-4360-516-A	POWER AMPLIFIER BOARD, COMPLETE (*11)	
61	4-928-635-11	SCREW, +BV (2.6X16) TAPPING	
* 62	4-949-235-01	HOOK (*2, 4, 5, 6, 7, 9, 11)	
* 63	4-955-781-11	PANEL, BACK (*1)	
* 63	4-955-824-91	PANEL, BACK (A27:E)	
* 63	4-955-824-61	PANEL, BACK (A27:AU2)	
* 63	4-955-778-21	PANEL, BACK (*3)	
* 63	4-955-778-31	PANEL, BACK (*4)	
* 63	4-955-778-41	PANEL, BACK (*5)	

Ref. No.	Part No.	Description	Remarks
* 63	4-955-778-91	PANEL, BACK (*6)	
* 63	4-955-778-11	PANEL, BACK (D209:AEP)	
* 63	4-955-778-81	PANEL, BACK (D209:AE2)	
* 63	4-955-824-31	PANEL, BACK (*8)	
* 63	4-955-824-11	PANEL, BACK (D259:AEP)	
* 63	4-955-824-81	PANEL, BACK (D259:AE2)	
* 63	4-955-824-21	PANEL, BACK (*10)	
* 63	4-955-824-51	PANEL, BACK (*11)	
△64	1-696-848-21	CORD, POWER (*1)	
△64	1-690-608-11	CORD, POWER (A27:AU2)	
△64	1-575-653-11	CORD, POWER (A27:E)	
△64	1-696-570-21	CORD, POWER (*3, 10)	
△64	1-575-651-11	CORD, POWER (*4, 5, 6, 7, 8, 9)	
△64	1-690-609-21	CORD, POWER (*11)	
65	1-533-217-31	HOLDER, FUSE (*1, D209)	
* 65	1-533-213-11	HOLDER, FUSE (*2, D259)	
△F1301	1-532-350-00	FUSE 4A (A27, D209, *9, 10)	
△F1301	1-576-108-11	FUSE 4A (*8, 11)	
△F1302	1-532-350-00	FUSE 4A (A27, D209, *9, 10)	
△F1302	1-576-108-11	FUSE 4A (*8, 11)	
△F1303	1-532-203-00	FUSE 2A (D209, *9, 10)	
△F1303	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1303	1-576-104-11	FUSE 2A (*8)	
△F1304	1-532-203-00	FUSE 2A (D209, *9, 10)	
△F1304	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1304	1-576-104-11	FUSE 2A (*8)	
△F1305	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1305	1-576-105-11	FUSE 2.5A (*8, 11)	
△F1306	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1306	1-576-105-11	FUSE 2.5A (*8, 11)	
IC1201	8-749-900-24	IC STK-4162MK2 (A27, *11)	
IC1201	8-749-900-96	IC STK-4162MK2 (D209, *8, 9, 10)	
Q1302	8-729-209-15	TRANSISTOR 2SD2012	
△T1301	1-423-438-11	TRANSFORMER, POWER (*1)	
△T1301	1-423-438-21	TRANSFORMER, POWER (*2)	
△T1301	1-423-437-11	TRANSFORMER, POWER (D209)	
△T1301	1-423-437-21	TRANSFORMER, POWER (*8, 9, 10)	
△T1301	1-423-431-11	TRANSFORMER, POWER (*11)	
△T1302	1-449-723-31	TRANSFORMER, POWER (EXCEPT *11)	
△T1302	1-450-786-11	TRANSFORMER, POWER (*11)	

Note:
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN SURROUND

SECTION 6 ELECTRICAL PARTS LIST

• Model name and destination shown by * 1 to * 11.

* 1 : A27 : Australian
* 2 : A27 : E, AU2
* 3 : D209 : UK
* 4 : D209 : Italian
* 5 : D209 : East European
* 6 : D209 : German
* 7 : D209 : AEP, AE2
* 8 : D259 : Italian
* 9 : D259 : AEP, AE2
* 10 : D259 : UK
* 11 : D259 : Canadian
★ A : * 4, 6, 8
★ B : * 3, 5, 7, 9, 10
★ C : 209 : AEP, * 3, 6, D259 : AEP, * 10

AU2 : AUS (with in PHONO MODEL)
AE2 : AEP (with in PHONO MODEL)

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- - XX, - X mean standardized parts, so they may have some difference from the original one.
- RESISTORS

All resistors are in ohms.
METAL : metal-film resistor
METAL OXIDE : Metal Oxide-film resistor

F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

SEMICONDUCTORS

In each case, u : μ , for example :

uA... : μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

CAPACITORS :

uF : μ F

COILS

uH : μ H

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4356-650-A	MAIN BOARD, COMPLETE (*1)		< CAPACITOR >			
*	A-4356-742-A	MAIN BOARD, COMPLETE (*2)		C301	1-161-379-00	CERAMIC 0.01uF	20% 25V (★:A)
*	A-4356-630-A	MAIN BOARD, COMPLETE (*3)		C302	1-124-477-11	ELECT 47uF	20% 25V
*	A-4356-933-A	MAIN BOARD, COMPLETE (*4)		C303	1-161-379-00	CERAMIC 0.01uF	20% 25V
*	A-4360-821-A	MAIN BOARD, COMPLETE (*5)		C305	1-161-379-00	CERAMIC 0.01uF	20% 25V (★:A)
*	A-4356-926-A	MAIN BOARD, COMPLETE (*6)		C306	1-161-379-00	CERAMIC 0.01uF	20% 25V (★:A)
*	A-4356-618-A	MAIN BOARD, COMPLETE (D209:AEP)		C307	1-161-379-00	CERAMIC 0.01uF	20% 25V. (EXCEPT *1)
*	A-4356-928-A	MAIN BOARD, COMPLETE (D209:AE2)		C308	1-161-379-00	CERAMIC 0.01uF	20% 25V (EXCEPT *1)
*	A-4360-543-A	MAIN BOARD, COMPLETE (*8)		C309	1-161-379-00	CERAMIC 0.01uF	20% 25V
*	A-4360-534-A	MAIN BOARD, COMPLETE (D259:AEP)		C310	1-124-477-11	ELECT 47uF	20% 25V
*	A-4360-538-A	MAIN BOARD, COMPLETE (D259:AE2)		C311	1-161-379-00	CERAMIC 0.01uF	20% 25V
*	A-4360-523-A	MAIN BOARD, COMPLETE (*10)		C312	1-101-006-00	CERAMIC 0.047uF	50V
*	A-4360-511-A	MAIN BOARD, COMPLETE (*11)		C313	1-123-382-00	ELECT 3.3uF	20% 100V
*	1-646-484-11	SURROUND BOARD (EXCEPT *11)		C314	1-161-379-00	CERAMIC 0.01uF	20% 25V
*	1-533-213-11	HOLDER, FUSE (*2, D259)		C315	1-161-329-00	CERAMIC 0.0068uF	30% 16V
*	1-533-213-31	HOLDER, FUSE (*2, D259)		C316	1-162-282-31	CERAMIC 100PF	10% 50V
*	1-533-217-31	HOLDER, FUSE (*1, D209)		C317	1-162-292-31	CERAMIC 680PF	10% 50V (*4, 6)
*	1-533-293-11	FUSE HOLDER (*2, D259)		C317	1-162-289-31	CERAMIC 390PF	10% 50V (*8)
*	4-942-204-01	PLATE, GROUND		C318	1-124-903-11	ELECT 1uF	20% 50V
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S (*6)		C320	1-124-903-11	ELECT 1uF	20% 50V
				C321	1-124-902-00	ELECT 0.47uF	20% 50V
				C322	1-124-463-00	ELECT 0.1uF	20% 50V
				C323	1-161-329-00	CERAMIC 0.0068uF	20% 16V (EXCEPT *11)
				C323	1-161-379-00	CERAMIC 0.01uF	20% 25V (*11)
				C324	1-161-329-00	CERAMIC 0.0068uF	20% 16V (EXCEPT *11)
				C324	1-161-379-00	CERAMIC 0.01uF	20% 25V (*11)
				C325	1-124-477-11	ELECT 47uF	20% 25V
				C326	1-124-907-11	ELECT 10uF	20% 50V
				C327	1-161-379-00	CERAMIC 0.01uF	20% 25V
				C328	1-124-463-00	ELECT 0.1uF	20% 50V

Note:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remarks
C329	1-124-927-11	ELECT 4.7uF	20% 100V
C330	1-161-379-00	CERAMIC 0.01uF	20% 25V
C331	1-126-176-11	ELECT 220uF	20% 10V
C332	1-161-379-00	CERAMIC 0.01uF	20% 25V
C335	1-161-379-00	CERAMIC 0.01uF	20% 25V
C336	1-161-379-00	CERAMIC 0.01uF	20% 25V
C339	1-162-210-31	CERAMIC 30PF	5% 50V (★:B)
C341	1-123-382-00	ELECT 3.3uF	20% 100V
C342	1-123-382-00	ELECT 3.3uF	20% 100V
C343	1-123-382-00	ELECT 3.3uF	20% 100V
C344	1-123-382-00	ELECT 3.3uF	20% 100V
C345	1-161-375-00	CERAMIC 0.0022uF	20% 50V
C346	1-161-375-00	CERAMIC 0.0022uF	20% 50V
C351	1-161-494-00	CERAMIC 0.022uF	25V (★:B)
C352	1-102-120-00	CERAMIC 0.0018uF	10% 50V (★:B)
C353	1-161-374-11	CERAMIC 0.0015uF	20% 50V (★:B)
C354	1-161-494-00	CERAMIC 0.022uF	25V (★:B)
C361	1-164-098-11	CERAMIC 0.047uF	12V
C361	1-161-379-00	CERAMIC 0.01uF	20% 25V (*4, 6)
C362	1-161-494-00	CERAMIC 0.022uF	25V
C363	1-164-159-11	CERAMIC 0.1uF	50V (★:B)
C364	1-161-494-00	CERAMIC 0.022uF	25V (★:B)
C371	1-162-198-31	CERAMIC 8.2PF	10% 50V (EXCEPT ★:B)
C371	1-162-196-31	CERAMIC 5.6PF	10% 50V (★:B)
C373	1-162-288-31	CERAMIC 330PF	10% 50V (*7, *8)
C501	1-102-961-00	CERAMIC 27PF	5% 50V
C502	1-102-961-00	CERAMIC 27PF	5% 50V
C503	1-124-477-11	ELECT 47uF	20% 25V
C504	1-161-379-00	CERAMIC 0.01uF	20% 25V
C505	1-161-379-00	CERAMIC 0.01uF	20% 25V
C506	1-161-379-00	CERAMIC 0.01uF	20% 25V
C507	1-161-379-00	CERAMIC 0.01uF	20% 25V
C521	1-124-925-11	ELECT 2.2uF	20% 100V
C522	1-124-463-00	ELECT 0.1uF	20% 50V
C523	1-161-379-00	CERAMIC 0.01uF	20% 25V
C524	1-161-379-00	CERAMIC 0.01uF	20% 25V
C525	1-124-477-11	ELECT 47uF	20% 25V (EXCEPT *5)
C525	1-126-101-11	ELECT 100uF	20% 16V (*5)
C531	1-136-173-00	FILM 0.47uF	5% 50V (★:B)
C532	1-161-494-00	CERAMIC 0.022uF	25V (★:B)
C533	1-124-463-00	ELECT 0.1uF	20% 50V (★:B)
C1001	1-124-925-11	ELECT 2.2uF	20% 100V
C1002	1-162-282-31	CERAMIC 100PF	10% 50V
C1003	1-162-282-31	CERAMIC 100PF	10% 50V
C1004	1-124-477-11	ELECT 47uF	20% 25V
C1005	1-161-377-00	CERAMIC 0.0047uF	20% 16V
C1006	1-161-374-11	CERAMIC 0.0015uF	20% 50V
C1007	1-124-464-11	ELECT 0.22uF	20% 50V
C1008	1-124-477-11	ELECT 47uF	20% 25V
C1010	1-124-477-11	ELECT 47uF	20% 25V
C1012	1-124-925-11	ELECT 2.2uF	20% 100V

Ref. No.	Part No.	Description	Remarks
C1013	1-162-290-31	CERAMIC 470PF	10% 50V
C1014	1-161-494-00	CERAMIC 0.022uF	25V
C1025	1-162-286-31	CERAMIC 220PF	10% 50V
C1026	1-162-286-31	CERAMIC 220PF	10% 50V
C1051	1-124-925-11	ELECT 2.2uF	20% 100V
C1052	1-162-282-31	CERAMIC 100PF	10% 50V
C1053	1-162-282-31	CERAMIC 100PF	10% 50V
C1054	1-124-477-11	ELECT 47uF	20% 25V
C1055	1-161-377-00	CERAMIC 0.0047uF	20% 16V
C1056	1-161-374-11	CERAMIC 0.0015uF	20% 50V
C1057	1-124-464-11	ELECT 0.22uF	20% 50V
C1058	1-124-477-11	ELECT 47uF	20% 25V
C1060	1-124-477-11	ELECT 47uF	20% 25V
C1062	1-124-925-11	ELECT 2.2uF	20% 100V
C1063	1-162-290-31	CERAMIC 470PF	10% 50V
C1064	1-161-494-00	CERAMIC 0.022uF	25V
C1075	1-162-286-31	CERAMIC 220PF	10% 50V
C1076	1-162-286-31	CERAMIC 220PF	10% 50V
C1212	1-124-916-11	ELECT 22uF	20% 63V
C1213	1-124-916-11	ELECT 22uF	20% 63V
C1221	1-126-101-11	ELECT 100uF	20% 16V
C1222	1-126-176-11	ELECT 220uF	20% 10V
C1223	1-126-176-11	ELECT 220uF	20% 10V
C1245	1-101-006-00	CERAMIC 0.047uF	50V (★:A)
C1246	1-101-006-00	CERAMIC 0.047uF	50V (★:A)
C1247	1-101-006-00	CERAMIC 0.047uF	50V (★:A)
C1248	1-101-006-00	CERAMIC 0.047uF	50V (★:A)
C1249	1-161-494-00	CERAMIC 0.022uF	25V (★:A)
C1250	1-161-494-00	CERAMIC 0.022uF	25V (★:A)
C1262	1-124-916-11	ELECT 22uF	20% 63V
C1263	1-124-916-11	ELECT 22uF	20% 63V
C1294	1-161-494-00	CERAMIC 0.022uF	25V (★:A)
C1302	1-102-394-11	CERAMIC 0.01uF	250V
C1304	1-126-224-11	ELECT 4700uF	20% 42V
C1305	1-126-224-11	ELECT 4700uF	20% 42V
C1306	1-124-477-11	ELECT 47uF	20% 25V
C1307	1-124-893-11	ELECT 2200uF	20% 10V
C1308	1-126-101-11	ELECT 100uF	20% 16V
C1309	1-124-556-11	ELECT 2200uF	20% 16V (A27, *11)
C1309	1-126-101-11	ELECT 100uF	20% 16V (D209, *8, 9, 10)
C1312	1-124-564-11	ELECT 4700uF	20% 25V (A27, *11)
C1312	1-124-563-11	ELECT 2200uF	20% 25V (D209, *8, 9, 10)
C1313	1-124-564-11	ELECT 4700uF	20% 25V (A27, *11)
C1313	1-124-563-11	ELECT 2200uF	20% 25V (D209, *8, 9, 10)
C1319	1-124-463-00	ELECT 0.1uF	20% 50V
C1320	1-124-907-11	ELECT 10uF	20% 50V
C1321	1-161-379-00	CERAMIC 0.01uF	20% 25V

MAIN SURROUND

Ref. No.	Part No.	Description	Remarks
C1322	1-161-379-00	CERAMIC 0.01uF	20% 25V
C1324	1-124-907-11	ELECT 10uF	20% 50V
C1326	1-124-907-11	ELECT 10uF	20% 50V
C1328	1-124-907-11	ELECT 10uF	20% 50V
C1330	1-126-101-11	ELECT 100uF	20% 16V
C1331	1-102-394-11	CERAMIC 0.01uF	250V
C1335	1-124-907-11	ELECT 10uF	20% 50V (★:C)
C1336	1-126-101-11	ELECT 100uF	20% 16V (★:C)
C1341	1-124-907-11	ELECT 10uF	20% 50V
C1346	1-124-925-11	ELECT 2.2uF	20% 100V
C1351	1-124-122-11	ELECT 100uF	20% 50V
C1352	1-126-105-11	ELECT 1000uF	20% 35V
C1353	1-136-165-00	FILM 0.1uF	5% 50V
C1354	1-136-165-00	FILM 0.1uF	5% 50V
C1360	1-161-494-00	CERAMIC 0.022uF	25V
			(*2, D259)
C1361	1-124-122-11	ELECT 100uF	20% 50V

< FILTER >

CF301	1-577-070-81	FILTER, CERAMIC (EXCEPT ★:A)
CF301	1-567-389-11	FILTER, CERAMIC (★:A)
CF303	1-577-070-81	FILTER, CERAMIC (EXCEPT ★:A)
CF303	1-567-389-11	FILTER, CERAMIC (★:A)
CF304	1-577-075-11	OSCILLATOR, CERAMIC

< CONNECTOR >

* CN212	1-564-506-11	PLUG, CONNECTOR 3P
CN302	1-695-089-11	PIN, CONNECTOR (PC BOARD) 11P
* CN501	1-568-830-11	SOCKET, CONNECTOR 11P
* CN1001	1-580-912-21	JACK, PIN 4P (IN) (*2, D259)
* CN1001	1-580-912-11	JACK, PIN 4P (IN) (*1, D209)
* CN1006	1-568-955-11	PIN, CONNECTOR 6P (A27)
CN1201	1-537-494-11	TERMINAL BOARD (SPEAKER) (EXCEPT *4, 8)
CN1201	1-537-481-11	TERMINAL BOARD (SPEAKER) (*4, 8)
* CN1203	1-564-508-11	PLUG, CONNECTOR 5P
CN1205	1-506-468-11	PIN, CONNECTOR 3P
CN1206	1-568-802-11	SOCKET, CONNECTOR 19P
* CN1241	1-565-291-11	SOCKET, CONNECTOR 13P (SYSTEM CONTROL)
CN1243	1-695-094-11	SOCKET, CONNECTOR 11P
CN1244	1-506-469-11	PIN, CONNECTOR 4P (A27, *9, 10, 11)
* CN1301	1-566-210-11	PIN, CONNECTOR 3P (POWER SOURCE) (★:C)

CN1302 1-506-469-11 PIN, CONNECTOR 4P

< DIODE >

D351	8-719-987-63	DIODE 1N4148M (★:B)
D1202	8-719-987-63	DIODE 1N4148M
D1203	8-719-987-63	DIODE 1N4148M
D1204	8-719-987-63	DIODE 1N4148M
D1205	8-719-933-48	DIODE HZS7B3L
D1302	8-719-312-09	DIODE RBA-402
D1303	8-719-200-82	DIODE 11ES2

Ref. No.	Part No.	Description	Remarks
D1304	8-719-200-82	DIODE 11ES2	
D1305	8-719-200-82	DIODE 11ES2	
D1306	8-719-200-82	DIODE 11ES2	
D1316	8-719-200-82	DIODE 11ES2	
D1317	8-719-200-82	DIODE 11ES2	
D1318	8-719-200-82	DIODE 11ES2	
D1319	8-719-200-82	DIODE 11ES2	
D1321	8-719-987-63	DIODE 1N4148M	
D1323	8-719-987-63	DIODE 1N4148M	
D1324	8-719-987-63	DIODE 1N4148M	
D1341	8-719-001-76	DIODE UZL-12M3	
D1347	8-719-987-63	DIODE 1N4148M	
D1368	8-719-200-82	DIODE 11ES2	
D1369	8-719-200-82	DIODE 11ES2	

< FRONTEND >

FE301	1-465-006-11	FRONT END (FM) (2 GANG) (*2, 3)
FE301	1-693-090-21	FRONT END (FM) (2 GANG) (*1, 7, 9, 10, 11)
FE301	1-463-857-21	FRONT END (★:A)
FE301	1-465-396-11	FRONT END (FM 3GANG) (*5)
FE351	1-236-463-11	ENCAPSULATED COMPONENT (★:B)
FE352	1-239-260-11	ENCAPSULATED COMPONENT (EXCEPT ★:B)
FE352	1-239-261-12	ENCAPSULATED COMPONENT (★:B)

< IC >

IC301	8-759-821-45	IC LA1851N
IC501	8-759-820-91	IC LC7218
IC1001	8-759-634-51	IC M5218AP
IC1002	8-759-000-48	IC MC14052BCP
IC1003	8-759-634-51	IC M5218AP
IC1202	8-759-111-68	IC uPC1237HA
IC1302	8-759-231-53	IC M5F7805
IC1303	8-759-071-48	IC M5F7807L
IC1304	8-759-604-95	IC M5F79M07
IC1305	8-759-820-13	IC L78MR06
IC1306	8-759-231-58	IC M5F7812L (★:C)

< JACK >

* J1202	1-569-130-11	JACK, PIN 2P (SURROUND SPEAKER)
		(EXCEPT *11)

< IFT >

IFT301	1-404-713-11	TRANSFORMER, IF
--------	--------------	-----------------

< COIL >

L301	1-410-686-11	INDUCTOR 1mH (A27, *11)
L301	1-407-500-00	INDUCTOR 4.7mH (D209, *8, 9, 10)
L351	1-410-525-11	INDUCTOR 220uH (★:B)
L1301	1-408-117-00	INDUCTOR 10uH (*6)
L1302	1-408-117-00	INDUCTOR 10uH (*6)

Ref. No.	Part No.	Description	Remarks
< FILTER >			
LPF301	1-235-164-00	FILTER, LOW PASS	
LPF302	1-235-164-00	FILTER, LOW PASS	
< TRANSISTOR >			
Q301	8-729-230-99	TRANSISTOR 2SC2669-OY (★:A)	
Q302	8-729-230-99	TRANSISTOR 2SC2669-OY (★:A)	
Q303	8-729-230-99	TRANSISTOR 2SC2669-OY (EXCEPT *1)	
Q304	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q305	8-729-900-80	TRANSISTOR DTC114ES	
Q306	8-729-900-61	TRANSISTOR DTA114ES	
Q307	8-729-900-80	TRANSISTOR DTC114ES	
Q308	8-729-620-05	TRANSISTOR 2SC2603-EF (*2, D259)	
Q308	8-729-119-78	TRANSISTOR 2SC2785-HFE (*1, D209)	
Q309	8-729-620-05	TRANSISTOR 2SC2603-EF (*2, D259)	
Q309	8-729-119-78	TRANSISTOR 2SC2785-HFE (*1, D209)	
Q351	8-729-900-80	TRANSISTOR DTC114ES (★:B)	
Q352	8-729-119-78	TRANSISTOR 2SC2785-HFE (*3, 5, 7)	
Q352	8-729-620-05	TRANSISTOR 2SC2603-EF (*9, 10)	
Q353	8-729-119-76	TRANSISTOR 2SA1175-HFE (★:B)	
Q354	8-729-900-80	TRANSISTOR DTC114ES (★:B)	
Q355	8-729-900-80	TRANSISTOR DTC114ES (★:B)	
Q356	8-729-900-80	TRANSISTOR DTC114ES (★:B)	
Q501	8-729-900-80	TRANSISTOR DTC114ES	
Q502	8-729-900-61	TRANSISTOR DTA114ES	
Q521	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q522	8-729-201-84	TRANSISTOR 2SC3112-B (A27, *11)	
Q522	8-729-141-26	TRANSISTOR 2SC3622A-LK (D209, *8, 9, 10)	
Q531	8-729-202-67	TRANSISTOR 2SK246-GR3 (★:B)	
Q532	8-729-141-26	TRANSISTOR 2SC3622A-LK (★:B)	
Q1004	8-729-900-36	TRANSISTOR DTC124ES (*1)	
Q1005	8-729-119-76	TRANSISTOR 2SA1175-HFE (*1)	
Q1204	8-729-900-63	TRANSISTOR DTA124ES	
Q1302	8-729-209-15	TRANSISTOR 2SD2012	
Q1304	8-729-620-05	TRANSISTOR 2SC2603-EF (*2, D259)	
Q1304	8-729-119-78	TRANSISTOR 2SC2785-HFE (*1, D209)	
Q1305	8-729-620-05	TRANSISTOR 2SC2603-EF (*2, D259)	
Q1305	8-729-119-78	TRANSISTOR 2SC2785-HFE (*1, D209)	
< RESISTOR >			
R301	1-249-401-11	CARBON 47 5% 1/4W F	
R302	1-249-409-11	CARBON 220 5% 1/4W F (*1)	
R302	1-249-413-11	CARBON 470 5% 1/4W F (*2, 3, 5)	
R302	1-249-407-11	CARBON 150 5% 1/4W F	
		(*7, 9, 10, 11)	
R302	1-249-405-11	CARBON 100 5% 1/4W F (★:A)	
R303	1-249-411-11	CARBON 330 5% 1/4W (★:A)	
R304	1-249-432-11	CARBON 18K 5% 1/4W (★:A)	
R305	1-249-411-11	CARBON 330 5% 1/4W (★:A)	
R306	1-249-434-11	CARBON 27K 5% 1/4W (★:A)	

Ref. No.	Part No.	Description	Remarks
R307	1-249-414-11	CARBON 560 5% 1/4W F (★:A)	
R308	1-249-411-11	CARBON 330 5% 1/4W	
R309	1-249-432-11	CARBON 18K 5% 1/4W (EXCEPT *1)	
R310	1-249-411-11	CARBON 330 5% 1/4W	
R311	1-249-434-11	CARBON 27K 5% 1/4W (EXCEPT *1)	
R311	1-247-891-00	CARBON 330K 5% 1/4W (*1)	
R312	1-249-414-11	CARBON 560 5% 1/4W F	
		(*2, 3, 5, 7, 9, 11)	
R312	1-249-416-11	CARBON 820 5% 1/4W F (★:A)	
R313	1-249-405-11	CARBON 100 5% 1/4W F	
R314	1-249-437-11	CARBON 47K 5% 1/4W (★:A)	
R315	1-249-404-00	CARBON 82 5% 1/4W	
R315	1-249-435-11	CARBON 33K 5% 1/4W (★:A)	
R316	1-249-429-11	CARBON 10K 5% 1/4W	
R317	1-249-417-11	CARBON 1K 5% 1/4W F	
R318	1-249-435-11	CARBON 33K 5% 1/4W	
R319	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R320	1-249-432-11	CARBON 18K 5% 1/4W	
R321	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R322	1-249-429-11	CARBON 10K 5% 1/4W	
R323	1-249-418-11	CARBON 1.2K 5% 1/4W F	
		(EXCEPT ★:A)	
R323	1-249-423-11	CARBON 3.3K 5% 1/4W F (*4, 6)	
R323	1-249-417-11	CARBON 1K 5% 1/4W F (*8)	
R324	1-249-429-11	CARBON 10K 5% 1/4W	
R325	1-249-429-11	CARBON 10K 5% 1/4W	
R326	1-249-409-11	CARBON 220 5% 1/4W F	
R327	1-249-437-11	CARBON 47K 5% 1/4W	
R328	1-249-437-11	CARBON 47K 5% 1/4W	
R331	1-247-899-11	CARBON 680K 5% 1/4W	
R332	1-247-899-11	CARBON 680K 5% 1/4W	
R333	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R334	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R335	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R336	1-249-420-11	CARBON 1.8K 5% 1/4W F	
R337	1-249-426-11	CARBON 5.6K 5% 1/4W	
R338	1-249-426-11	CARBON 5.6K 5% 1/4W	
R351	1-249-433-11	CARBON 22K 5% 1/4W (★:B)	
R352	1-249-437-11	CARBON 47K 5% 1/4W (★:B)	
R353	1-247-903-00	CARBON 1M 5% 1/4W (★:B)	
R354	1-249-441-11	CARBON 100K 5% 1/4W (★:B)	
R355	1-249-433-11	CARBON 22K 5% 1/4W (★:B)	
R356	1-249-421-11	CARBON 2.2K 5% 1/4W F (★:B)	
R361	1-249-437-11	CARBON 47K 5% 1/4W	
R362	1-249-437-11	CARBON 47K 5% 1/4W	
R363	1-249-425-11	CARBON 4.7K 5% 1/4W F (★:B)	
R364	1-249-425-11	CARBON 4.7K 5% 1/4W F (★:B)	
R365	1-249-429-11	CARBON 10K 5% 1/4W	
		(D209, *8, 9, 10)	
R366	1-249-413-11	CARBON 470 5% 1/4W F (★:B)	
R367	1-249-434-11	CARBON 27K 5% 1/4W (★:B)	
R368	1-249-433-11	CARBON 22K 5% 1/4W (★:B)	
R370	1-249-423-11	CARBON 3.3K 5% 1/4W F (★:A)	

MAIN	SURROUND
------	----------

Ref. No.	Part No.	Description	Remarks
R501	1-249-417-11	CARBON 1K 5% 1/4W F	
R502	1-249-417-11	CARBON 1K 5% 1/4W F	
R503	1-249-417-11	CARBON 1K 5% 1/4W F	
R504	1-249-417-11	CARBON 1K 5% 1/4W F	
R505	1-249-429-11	CARBON 10K 5% 1/4W	
R506	1-249-417-11	CARBON 1K 5% 1/4W F	
R510	1-249-401-11	CARBON 47 5% 1/4W F	
R511	1-249-429-11	CARBON 10K 5% 1/4W	
R512	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R513	1-249-417-11	CARBON 1K 5% 1/4W F	
R514	1-249-429-11	CARBON 10K 5% 1/4W	
R515	1-249-417-11	CARBON 1K 5% 1/4W F	
R521	1-249-423-11	CARBON 3.3K 5% 1/4W F	
R522	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R523	1-249-414-11	CARBON 560 5% 1/4W F	
R524	1-249-417-11	CARBON 1K 5% 1/4W F	
R525	1-249-410-11	CARBON 270 5% 1/4W F	
R526	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R527	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R528	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R529	1-249-405-11	CARBON 100 5% 1/4W F	
R530	1-249-405-11	CARBON 100 5% 1/4W F	
R531	1-249-423-11	CARBON 3.3K 5% 1/4W F (★:B)	
R532	1-249-433-11	CARBON 22K 5% 1/4W (★:B)	
R533	1-249-414-11	CARBON 560 5% 1/4W F (★:B)	
R534	1-249-417-11	CARBON 1K 5% 1/4W F (★:B)	
R535	1-249-410-11	CARBON 270 5% 1/4W F (★:B)	
R536	1-249-421-11	CARBON 2.2K 5% 1/4W F (★:B)	
R537	1-249-425-11	CARBON 4.7K 5% 1/4W F (★:B)	
R538	1-249-405-11	CARBON 100 5% 1/4W F (★:B)	
R613	1-249-441-11	CARBON 100K 5% 1/4W (*9, 10, 11)	
R631	1-249-441-11	CARBON 100K 5% 1/4W (A27, D209, *8)	
R1001	1-249-417-11	CARBON 1K 5% 1/4W F	
R1002	1-249-441-11	CARBON 100K 5% 1/4W	
R1003	1-249-416-11	CARBON 820 5% 1/4W F	
R1004	1-247-897-11	CARBON 560K 5% 1/4W	
R1005	1-249-437-11	CARBON 47K 5% 1/4W	
R1006	1-249-409-11	CARBON 220 5% 1/4W F	
R1007	1-249-441-11	CARBON 100K 5% 1/4W	
R1008	1-249-409-11	CARBON 220 5% 1/4W F	
R1010	1-249-417-11	CARBON 1K 5% 1/4W F	
R1012	1-249-417-11	CARBON 1K 5% 1/4W F	
R1013	1-249-441-11	CARBON 100K 5% 1/4W	
R1014	1-249-437-11	CARBON 47K 5% 1/4W	
R1015	1-249-437-11	CARBON 47K 5% 1/4W	
R1021	1-249-437-11	CARBON 47K 5% 1/4W	
R1022	1-249-432-11	CARBON 18K 5% 1/4W (A27)	

Ref. No.	Part No.	Description	Remarks
R1023	1-249-437-11	CARBON 47K 5% 1/4W	
R1024	1-249-417-11	CARBON 1K 5% 1/4W F	
R1029	1-249-433-11	CARBON 22K 5% 1/4W (*1)	
R1030	1-249-433-11	CARBON 22K 5% 1/4W (*1)	
R1031	1-249-433-11	CARBON 22K 5% 1/4W (*1)	
R1035	1-249-415-11	CARBON 680 5% 1/4W F	
R1037	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1051	1-249-417-11	CARBON 1K 5% 1/4W F	
R1052	1-249-441-11	CARBON 100K 5% 1/4W	
R1053	1-249-416-11	CARBON 820 5% 1/4W F	
R1054	1-247-897-11	CARBON 560K 5% 1/4W	
R1055	1-249-437-11	CARBON 47K 5% 1/4W	
R1056	1-249-409-11	CARBON 220 5% 1/4W F	
R1057	1-249-441-11	CARBON 100K 5% 1/4W	
R1058	1-249-409-11	CARBON 220 5% 1/4W F	
R1060	1-249-417-11	CARBON 1K 5% 1/4W F	
R1062	1-249-417-11	CARBON 1K 5% 1/4W F	
R1063	1-249-441-11	CARBON 100K 5% 1/4W	
R1065	1-249-415-11	CARBON 680 5% 1/4W F	
R1071	1-249-437-11	CARBON 47K 5% 1/4W	
R1072	1-249-432-11	CARBON 18K 5% 1/4W (A27)	
R1073	1-249-437-11	CARBON 47K 5% 1/4W	
R1074	1-249-417-11	CARBON 1K 5% 1/4W F	
R1095	1-249-433-11	CARBON 22K 5% 1/4W (A27, *11)	
R1222	1-249-415-11	CARBON 680 5% 1/4W F	
R1223	1-249-415-11	CARBON 680 5% 1/4W F	
R1226	1-215-890-11	METAL OXIDE 470 5% 2W F	
R1233	1-249-433-11	CARBON 22K 5% 1/4W	
R1234	1-249-433-11	CARBON 22K 5% 1/4W	
R1235	1-249-437-11	CARBON 47K 5% 1/4W	
R1236	1-249-441-11	CARBON 100K 5% 1/4W	
R1237	1-249-429-11	CARBON 10K 5% 1/4W	
R1240	1-249-438-11	CARBON 56K 5% 1/4W	
R1241	1-249-385-11	CARBON 2.2 5% 1/6W F (★:A)	
R1242	1-249-385-11	CARBON 2.2 5% 1/6W F (★:A)	
R1243	1-249-385-11	CARBON 2.2 5% 1/6W F (★:A)	
R1244	1-249-385-11	CARBON 2.2 5% 1/6W F (★:A)	
R1272	1-249-415-11	CARBON 680 5% 1/4W F	
R1273	1-249-415-11	CARBON 680 5% 1/4W F	
R1290	1-249-437-11	CARBON 47K 5% 1/4W	
R1301	1-249-429-11	CARBON 10K 5% 1/4W	
R1302	1-249-429-11	CARBON 10K 5% 1/4W	
R1306	1-249-433-11	CARBON 22K 5% 1/4W	
R1309	1-249-433-11	CARBON 22K 5% 1/4W	
R1321	1-249-417-11	CARBON 1K 5% 1/4W F	
R1322	1-249-429-11	CARBON 10K 5% 1/4W	
R1345	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1346	1-249-425-11	CARBON 4.7K 5% 1/4W F (★:C)	
R1347	1-249-417-11	CARBON 1K 5% 1/4W F	

MAIN	SURROUND	PANEL	H. P	POWER SUPPLY (B)	MIC	STAND-BY	VR
------	----------	-------	------	------------------	-----	----------	----

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< VARIABLE RESISTOR >					
RV301	1-238-601-11	RES, ADJ, CARBON 22K		*	1-646-478-11	POWER SUPPLY (B) BOARD	
RV302	1-238-601-11	RES, ADJ, CARBON 22K				*****	
		< RELAY >		*	1-646-479-11	MIC BOARD (A27)	

RY1201	1-515-533-11	RELAY		*	1-646-480-11	STAND-BY SW BOARD	
RY1201	1-515-920-11	RELAY (24V) (D209,*8)				*****	
		< TRANSFORMER >		*	1-646-497-11	VR BOARD	

T301	1-404-807-11	TRANSFORMER, DISCRIMINATOR		*	1-533-213-11	HOLDER, FUSE (*2, D259)	
T302	1-235-126-00	ENCAPSULATED COMPONENT (★:A)		*	1-533-213-31	HOLDER, FUSE (*2, D259)	
		< TERMINAL >			1-533-217-31	HOLDER, FUSE (D209)	
TM301	1-537-264-11	TERMINAL BOARD (ANTENNA) (A27,*3,10,11)		*	1-533-293-11	FUSE HOLDER (*2, D259)	
* TM301	1-537-288-11	TERMINAL BOARD, ANTENNA (PAL) (ANTENNA)		*	4-942-301-01	HOLDER, FL TUBE	
		(*4, 5, 6, 7, 8, 9)					
		< TEST PIN >		*	4-949-935-31	CUSHION (FL) (*2, D259)	
* TP1	1-560-060-00	PIN, CONNECTOR 2P					
		< VIBRATOR >					
XT501	1-577-126-21	VIBRATOR, CRYSTAL					
XT501	1-579-383-11	VIBRATOR, CRYSTAL					

*	A-4356-640-A	PANEL BOARD, COMPLETE (*1)		C603	1-136-169-00	FILM 0.22uF	5% 50V
		*****		C604	1-164-159-11	CERAMIC 0.1uF	50V
*	A-4356-736-A	PANEL BOARD, COMPLETE (*2)		C605	1-125-486-11	DOUBLE LAYERS 0.22F	5.5V
		*****		C606	1-164-159-11	CERAMIC 0.1uF	50V
*	A-4356-623-A	PANEL BOARD, COMPLETE (*3)		C607	1-124-907-11	ELECT 10uF	20% 50V

*	A-4356-930-A	PANEL BOARD, COMPLETE (*4)		C608	1-161-379-00	CERAMIC 0.01uF	20% 25V
		*****		C609	1-161-379-00	CERAMIC 0.01uF	20% 25V
*	A-4360-822-A	PANEL BOARD, COMPLETE (*5)		C610	1-162-286-31	CERAMIC 220PF	10% 50V
		*****		C650	1-124-907-11	ELECT 10uF	20% 50V
*	A-4356-924-A	PANEL BOARD, COMPLETE (*6)		C1101	1-124-257-00	ELECT 2.2uF	20% 50V

*	A-4356-608-A	PANEL BOARD, COMPLETE (*7)		C1102	1-124-589-11	ELECT 47uF	20% 16V
		*****		C1103	1-162-282-31	CERAMIC 100PF	10% 50V
*	A-4360-541-A	PANEL BOARD, COMPLETE (*8)		C1104	1-124-257-00	ELECT 2.2uF	20% 50V
		*****		C1105	1-124-464-11	ELECT 0.22uF	20% 50V
*	A-4360-531-A	PANEL BOARD, COMPLETE (*9)		C1106	1-136-161-00	FILM 0.047uF	5% 50V

*	A-4360-520-A	PANEL BOARD, COMPLETE (*10)		C1107	1-136-155-00	FILM 0.015uF	5% 50V
		*****		C1108	1-136-155-00	FILM 0.015uF	5% 50V
*	A-4360-509-A	PANEL BOARD, COMPLETE (*11)		C1109	1-137-437-11	FILM 0.0056uF	5% 50V
		*****		C1110	1-161-327-00	CERAMIC 0.0033uF	20% 16V
				C1111	1-136-155-00	FILM 0.015uF	5% 50V
				C1112	1-136-157-00	FILM 0.022uF	5% 50V
				C1113	1-136-153-00	FILM 0.01uF	5% 50V
				C1114	1-161-377-00	CERAMIC 0.0047uF	20% 16V
				C1115	1-124-257-00	ELECT 2.2uF	20% 50V
				C1120	1-161-379-00	CERAMIC 0.01uF	20% 25V
				C1121	1-161-379-00	CERAMIC 0.01uF	20% 25V
				C1123	1-162-286-31	CERAMIC 220PF	10% 50V
				C1131	1-162-215-31	CERAMIC 47PF	5% 50V
				C1132	1-162-215-31	CERAMIC 47PF	5% 50V
				C1151	1-124-257-00	ELECT 2.2uF	20% 50V
				C1152	1-124-589-11	ELECT 47uF	20% 16V
				C1153	1-162-282-31	CERAMIC 100PF	10% 50V
				C1154	1-124-257-00	ELECT 2.2uF	20% 50V
*	1-646-477-11	H. P BOARD					

PANEL	H. P	POWER SUPPLY (B)	MIC	STAND-BY	VR
-------	------	------------------	-----	----------	----

Ref. No.	Part No.	Description	Remarks
C1155	1-124-464-11	ELECT 0.22uF 20% 50V	
C1156	1-136-161-00	FILM 0.047uF 5% 50V	
C1157	1-136-155-00	FILM 0.015uF 5% 50V	
C1158	1-136-155-00	FILM 0.015uF 5% 50V	
C1159	1-137-437-11	FILM 0.0056uF 5% 50V	
C1160	1-161-327-00	CERAMIC 0.0033uF 20% 16V	
C1161	1-136-155-00	FILM 0.015uF 5% 50V	
C1162	1-136-157-00	FILM 0.022uF 5% 50V	
C1163	1-136-153-00	FILM 0.01uF 5% 50V	
C1164	1-161-377-00	CERAMIC 0.0047uF 20% 16V	
C1165	1-124-257-00	ELECT 2.2uF 20% 50V	
C1173	1-162-286-31	CERAMIC 220PF 10% 50V	
C1181	1-162-215-31	CERAMIC 47PF 5% 50V	
C1182	1-162-215-31	CERAMIC 47PF 5% 50V	
C1198	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C1237	1-162-282-31	CERAMIC 100PF 10% 50V (★:A)	
C1238	1-162-282-31	CERAMIC 100PF 10% 50V (★:A)	
C1401	1-162-294-31	CERAMIC 0.001uF 10% 50V (A27)	
C1402	1-124-916-11	ELECT 22uF 20% 63V (A27)	
C1403	1-124-916-11	ELECT 22uF 20% 63V (A27)	
C1406	1-124-443-00	ELECT 100uF 20% 10V (*2)	
C1408	1-126-163-11	ELECT 4.7uF 20% 50V (A27)	
C1409	1-161-379-00	CERAMIC 0.01uF 20% 25V (A27)	
C1410	1-126-163-11	ELECT 4.7uF 20% 50V (A27, D259)	
C1411	1-124-443-00	ELECT 100uF 20% 10V (*1)	
C1601	1-124-925-11	ELECT 2.2uF 20% 100V (A27)	
C1602	1-124-463-00	ELECT 0.1uF 20% 50V (A27)	
C1603	1-124-925-11	ELECT 2.2uF 20% 100V (A27)	
C1604	1-162-294-31	CERAMIC 0.001uF 10% 50V (A27)	
C1605	1-162-215-31	CERAMIC 47PF 5% 50V (A27)	
C1606	1-162-282-31	CERAMIC 100PF 10% 50V (A27)	
C1607	1-162-215-31	CERAMIC 47PF 5% 50V (A27)	
C1608	1-124-589-11	ELECT 47uF 20% 16V (A27)	
C1609	1-124-589-11	ELECT 47uF 20% 16V (A27)	
C1610	1-162-282-31	CERAMIC 100PF 10% 50V (A27)	

< CONNECTOR >

* CN601	1-568-830-11	SOCKET, CONNECTOR 11P
CN1101	1-568-802-11	SOCKET, CONNECTOR 19P

< DIODE >

D601	8-719-987-63	DIODE 1N4148M
D602	8-719-010-26	DIODE UZ-3.9BSB
D603	8-719-987-63	DIODE 1N4148M
D604	8-719-987-63	DIODE 1N4148M
D605	8-719-987-63	DIODE 1N4148M
D606	8-719-933-48	DIODE HZS7B3L
D611	8-719-987-63	DIODE 1N4148M
D612	8-719-987-63	DIODE 1N4148M
D613	8-719-987-63	DIODE 1N4148M

Ref. No.	Part No.	Description	Remarks
D614	8-719-987-63	DIODE 1N4148M	
D615	8-719-987-63	DIODE 1N4148M	
D616	8-719-987-63	DIODE 1N4148M	
D622	8-719-987-63	DIODE 1N4148M (*1, 4, 8, 11)	
D623	8-719-987-63	DIODE 1N4148M (A27, *11)	
D624	8-719-987-63	DIODE 1N4148M (*5)	
D625	8-719-987-63	DIODE 1N4148M	
D626	8-719-987-63	DIODE 1N4148M	
D629	8-719-987-63	DIODE 1N4148M	
D641	8-719-200-82	DIODE 11ES2	
D1130	8-719-301-37	LED SEL2210S-CD	
D1131	8-719-301-37	LED SEL2210S-CD	
D1132	8-719-301-37	LED SEL2210S-CD	
D1133	8-719-301-37	LED SEL2210S-CD	
D1134	8-719-301-37	LED SEL2210S-CD	
D1141	8-719-301-37	LED SEL2210S-CD	
D1145	8-719-313-69	DIODE SEL3210S-CD	
D1151	8-719-987-63	DIODE 1N4148M	
D1152	8-719-987-63	DIODE 1N4148M	
D1153	8-719-987-63	DIODE 1N4148M	
D1154	8-719-987-63	DIODE 1N4148M	

< FILTER >

FL601	1-519-732-11	INDICATOR TUBE, FLUORESCENT
FL1401	1-519-648-21	INDICATOR TUBE, FLUORESCENT (A27)

< IC >

IC601	8-759-096-99	IC uPD75212ACW-A47
IC602	8-749-922-36	IC GP1U50XB
IC1101	8-759-634-51	IC M5218AP
IC1102	8-759-634-51	IC M5218AP
IC1103	8-759-820-62	IC LB1639
IC1104	8-759-916-12	IC TC74HC00P
IC1401	8-759-065-87	IC XR-1096 (A27)
IC1601	8-759-634-51	IC M5218AP (A27)

< JACK >

J601	1-691-002-11	JACK, LARGE TYPE (HEADPHONES) (*2)
J601	1-573-151-11	JACK, LARGE TYPE (HEADPHONES) (*1)
* J1201	1-691-003-11	JACK, LARGE TYPE (MIC)

< COIL >

L601	1-410-521-11	INDUCTOR 100uH
------	--------------	----------------

< TRANSISTOR >

Q601	8-729-620-05	TRANSISTOR 2SC2603-EF (*2, D259)
Q601	8-729-119-78	TRANSISTOR 2SC2785-HFE (*1, D209)
Q602	8-729-900-80	TRANSISTOR DTC114ES
Q603	8-729-900-80	TRANSISTOR DTC114ES
Q1101	8-729-620-05	TRANSISTOR 2SC2603-EF (*2, D259)

PANEL	H. P	POWER SUPPLY (B)	MIC	STAND-BY	VR
-------	------	------------------	-----	----------	----

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
Q1101	8-729-119-78	TRANSISTOR	2SC2785-HFE (*1, D209)	R1114	1-249-429-11	CARBON	10K 5% 1/4W
Q1102	8-729-141-26	TRANSISTOR	2SC3622A-LK	R1115	1-249-429-11	CARBON	10K 5% 1/4W
Q1121	8-729-900-36	TRANSISTOR	DTC124ES	R1116	1-247-852-11	CARBON	7.5K 5% 1/4W
Q1122	8-729-119-76	TRANSISTOR	2SA1175-HFE	R1117	1-247-852-11	CARBON	7.5K 5% 1/4W
Q1136	8-729-900-36	TRANSISTOR	DTC124ES	R1118	1-249-425-11	CARBON	4.7K 5% 1/4W F
Q1138	8-729-900-36	TRANSISTOR	DTC124ES	R1119	1-249-425-11	CARBON	4.7K 5% 1/4W F
Q1141	8-729-900-63	TRANSISTOR	DTA124ES	R1120	1-249-423-11	CARBON	3.3K 5% 1/4W F
Q1142	8-729-900-63	TRANSISTOR	DTA124ES	R1121	1-249-423-11	CARBON	3.3K 5% 1/4W F
Q1143	8-729-900-80	TRANSISTOR	DTC114ES	R1122	1-247-887-00	CARBON	220K 5% 1/4W
Q1144	8-729-900-80	TRANSISTOR	DTC114ES	R1123	1-249-421-11	CARBON	2.2K 5% 1/4W F
Q1145	8-729-900-61	TRANSISTOR	DTA114ES	R1124	1-249-425-11	CARBON	4.7K 5% 1/4W F
Q1151	8-729-620-05	TRANSISTOR	2SC2603-EF (*2, D259)	R1125	1-249-433-11	CARBON	22K 5% 1/4W
Q1151	8-729-119-78	TRANSISTOR	2SC2785-HFE (*1, D209)	R1126	1-249-423-11	CARBON	3.3K 5% 1/4W F (A27)
Q1152	8-729-141-26	TRANSISTOR	2SC3622A-LK	R1127	1-249-436-11	CARBON	39K 5% 1/4W (A27)
< RESISTOR >				R1130	1-249-412-11	CARBON	390 5% 1/4W F
R601	1-249-429-11	CARBON	10K 5% 1/4W	R1132	1-249-412-11	CARBON	390 5% 1/4W F
R602	1-249-429-11	CARBON	10K 5% 1/4W	R1133	1-249-412-11	CARBON	390 5% 1/4W F
R603	1-249-423-11	CARBON	3.3K 5% 1/4W F	R1135	1-249-433-11	CARBON	22K 5% 1/4W
R604	1-249-437-11	CARBON	47K 5% 1/4W (*4, 8)	R1142	1-249-412-11	CARBON	390 5% 1/4W F
R605	1-249-433-11	CARBON	22K 5% 1/4W	R1143	1-249-433-11	CARBON	22K 5% 1/4W
R606	1-249-433-11	CARBON	22K 5% 1/4W	R1145	1-249-412-11	CARBON	390 5% 1/4W F
R607	1-249-439-11	CARBON	68K 5% 1/4W	R1149	1-249-429-11	CARBON	10K 5% 1/4W
R608	1-249-417-11	CARBON	1K 5% 1/4W F	R1151	1-249-441-11	CARBON	100K 5% 1/4W
R609	1-249-405-11	CARBON	100 5% 1/4W F	R1152	1-249-417-11	CARBON	1K 5% 1/4W F
R610	1-249-429-11	CARBON	10K 5% 1/4W	R1154	1-249-441-11	CARBON	100K 5% 1/4W
R611	1-249-437-11	CARBON	47K 5% 1/4W	R1155	1-249-433-11	CARBON	22K 5% 1/4W
R612	1-249-417-11	CARBON	1K 5% 1/4W F	R1156	1-249-424-11	CARBON	3.9K 5% 1/4W F
R613	1-249-425-11	CARBON	4.7K 5% 1/4W F	R1157	1-249-441-11	CARBON	100K 5% 1/4W
R614	1-249-393-11	CARBON	10 5% 1/4W F	R1158	1-249-427-11	CARBON	6.8K 5% 1/4W F
R621	1-249-433-11	CARBON	22K 5% 1/4W	R1159	1-249-412-11	CARBON	390 5% 1/4W F
R622	1-249-433-11	CARBON	22K 5% 1/4W	R1160	1-249-431-11	CARBON	15K 5% 1/4W
R623	1-249-433-11	CARBON	22K 5% 1/4W	R1161	1-249-439-11	CARBON	68K 5% 1/4W
R624	1-249-433-11	CARBON	22K 5% 1/4W	R1162	1-249-433-11	CARBON	22K 5% 1/4W
R625	1-249-417-11	CARBON	1K 5% 1/4W F (*1, D259)	R1163	1-249-431-11	CARBON	15K 5% 1/4W
R642	1-249-409-11	CARBON	220 5% 1/4W F	R1164	1-249-429-11	CARBON	10K 5% 1/4W
R643	1-249-417-11	CARBON	1K 5% 1/4W F (*2, D209, 8, 10, 11)	R1165	1-249-429-11	CARBON	10K 5% 1/4W
R1065	1-249-409-11	CARBON	220 5% 1/4W F (*2)	R1166	1-247-852-11	CARBON	7.5K 5% 1/4W
R1101	1-249-441-11	CARBON	100K 5% 1/4W	R1167	1-247-852-11	CARBON	7.5K 5% 1/4W
R1102	1-249-417-11	CARBON	1K 5% 1/4W F	R1168	1-249-425-11	CARBON	4.7K 5% 1/4W F
R1103	1-249-431-11	CARBON	15K 5% 1/4W	R1169	1-249-425-11	CARBON	4.7K 5% 1/4W F
R1104	1-249-441-11	CARBON	100K 5% 1/4W	R1170	1-249-423-11	CARBON	3.3K 5% 1/4W F
R1105	1-249-433-11	CARBON	22K 5% 1/4W	R1171	1-249-423-11	CARBON	3.3K 5% 1/4W F
R1106	1-249-424-11	CARBON	3.9K 5% 1/4W F	R1172	1-247-887-00	CARBON	220K 5% 1/4W
R1107	1-249-441-11	CARBON	100K 5% 1/4W	R1173	1-249-421-11	CARBON	2.2K 5% 1/4W F
R1108	1-249-427-11	CARBON	6.8K 5% 1/4W F	R1174	1-249-425-11	CARBON	4.7K 5% 1/4W F
R1109	1-249-412-11	CARBON	390 5% 1/4W F	R1176	1-249-423-11	CARBON	3.3K 5% 1/4W F (A27)
R1110	1-249-431-11	CARBON	15K 5% 1/4W	R1177	1-249-436-11	CARBON	39K 5% 1/4W (A27)
R1111	1-249-439-11	CARBON	68K 5% 1/4W	R1401	1-249-418-11	CARBON	1.2K 5% 1/4W F (A27)
R1112	1-249-433-11	CARBON	22K 5% 1/4W	R1402	1-247-881-00	CARBON	120K 5% 1/4W (A27)
R1113	1-249-431-11	CARBON	15K 5% 1/4W	R1403	1-247-881-00	CARBON	120K 5% 1/4W (A27)
				R1405	1-249-409-11	CARBON	220 5% 1/4W F (*1)

PANEL	H. P	POWER SUPPLY (B)	MIC	STAND-BY	VR	POWER AMPLIFIER
-------	------	------------------	-----	----------	----	-----------------

Ref. No.	Part No.	Description	Remarks
R1411	1-239-054-11	COMPOSITION CIRCUIT BLOCK	(A27)
R1412	1-239-054-11	COMPOSITION CIRCUIT BLOCK	(A27)
R1601	1-249-429-11	CARBON 10K 5% 1/4W	(A27)
R1602	1-249-417-11	CARBON 1K 5% 1/4W F	(A27)
R1603	1-249-412-11	CARBON 390 5% 1/4W F	(A27)
R1604	1-249-434-11	CARBON 27K 5% 1/4W	(A27)
R1605	1-249-433-11	CARBON 22K 5% 1/4W	(A27)
R1606	1-249-437-11	CARBON 47K 5% 1/4W	(A27)

< VARIABLE RESISTOR >

RV1101	1-223-251-11	RES, VAR, CARBON 100K/100K (SURROUND)
RV1102	1-223-251-11	RES, VAR, CARBON 100K/100K (DBFB)
RV1103	1-223-289-11	RES, VAR, SLIDE 100K (100Hz)
RV1104	1-223-289-11	RES, VAR, SLIDE 100K (330Hz)
RV1105	1-223-289-11	RES, VAR, SLIDE 100K (1KHz)

RV1106	1-223-289-11	RES, VAR, SLIDE 100K (3.3KHz)
RV1107	1-223-289-11	RES, VAR, SLIDE 100K (10KHz)
RV1108	1-223-253-11	RES, VAR, CARBON 100K/100K (BALANCE)
RV1109	1-223-291-11	RES, VAR, CARBON 100K/100K (VOLUME)
RV1153	1-223-289-11	RES, VAR, SLIDE 100K (100Hz)

RV1154	1-223-289-11	RES, VAR, SLIDE 100K (330Hz)
RV1155	1-223-289-11	RES, VAR, SLIDE 100K (1KHz)
RV1156	1-223-289-11	RES, VAR, SLIDE 100K (3.3KHz)
RV1157	1-223-289-11	RES, VAR, SLIDE 100K (10KHz)

< SWITCH >

S601	1-554-303-21	SWITCH, TACTILE (1)
S602	1-554-303-21	SWITCH, TACTILE (2)
S603	1-554-303-21	SWITCH, TACTILE (3)
S604	1-554-303-21	SWITCH, TACTILE (4)
S605	1-554-303-21	SWITCH, TACTILE (5)

S606	1-554-303-21	SWITCH, TACTILE (6)
S607	1-554-303-21	SWITCH, TACTILE (7)
S608	1-554-303-21	SWITCH, TACTILE (8)
S609	1-554-303-21	SWITCH, TACTILE (9)
S610	1-554-303-21	SWITCH, TACTILE (0)

S611	1-554-303-21	SWITCH, TACTILE (+)
S612	1-554-303-21	SWITCH, TACTILE (-)
S613	1-554-303-21	SWITCH, TACTILE (SHIFT)
S614	1-554-303-21	SWITCH, TACTILE (BAND SELECT)
S615	1-554-303-21	SWITCH, TACTILE (ST/MUTE)

S616	1-554-303-21	SWITCH, TACTILE (MEMORY)
S618	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)
S619	1-554-303-21	SWITCH, TACTILE (VIDEO) (A27, *4, D259)
S620	1-554-303-21	SWITCH, TACTILE (TAPE)
S621	1-554-303-21	SWITCH, TACTILE (CD)

S622	1-554-303-21	SWITCH, TACTILE (TUNER)
S623	1-554-303-21	SWITCH, TACTILE (PHONO)
S1102	1-571-305-11	SWITCH, PUSH (EQUILIZER) (1 KEY)

Ref. No.	Part No.	Description	Remarks
		< VIBRATOR >	

X601	1-567-775-11	VIBRATOR, CERAMIC	
------	--------------	-------------------	--

*	A-4356-649-A	POWER AMPLIFIER BOARD, COMPLETE (*1)	

*	A-4356-749-A	POWER AMPLIFIER BOARD, COMPLETE (*2)	

*	A-4356-628-A	POWER AMPLIFIER BOARD, COMPLETE (*3)	

*	A-4356-935-A	POWER AMPLIFIER BOARD, COMPLETE (*4, 6)	

*	A-4356-616-A	POWER AMPLIFIER BOARD, COMPLETE (*5, 7)	

*	A-4360-546-A	POWER AMPLIFIER BOARD, COMPLETE (*8)	

*	A-4360-537-A	POWER AMPLIFIER BOARD, COMPLETE (*9)	

*	A-4360-527-A	POWER AMPLIFIER BOARD, COMPLETE (*10)	

*	A-4360-516-A	POWER AMPLIFIER BOARD, COMPLETE (*11)	

< CAPACITOR >

C1201	1-124-257-00	ELECT 2.2uF 20% 50V	
C1202	1-162-286-31	CERAMIC 220PF 10% 50V	(EXCEPT ★:A)
C1202	1-162-290-31	CERAMIC 470PF 10% 50V	(★:A)
C1203	1-162-286-31	CERAMIC 220PF 10% 50V	(EXCEPT ★:A)
C1203	1-162-292-31	CERAMIC 680PF 10% 50V	(★:A)
C1204	1-124-477-11	ELECT 47uF 20% 25V	
C1205	1-124-910-11	ELECT 47uF 20% 50V	
C1206	1-124-122-11	ELECT 100uF 20% 50V	
C1207	1-136-165-00	FILM 0.1uF 5% 50V	
C1208	1-124-916-11	ELECT 22uF 20% 63V	
C1209	1-164-159-11	CERAMIC 0.1uF 50V	
C1210	1-136-163-00	FILM 0.068uF 5% 50V	
C1211	1-136-163-00	FILM 0.068uF 5% 50V	
C1220	1-124-910-11	ELECT 47uF 20% 50V	
C1230	1-161-494-00	CERAMIC 0.022uF 25V	(★:A)
C1231	1-161-494-00	CERAMIC 0.022uF 25V	(★:A)
C1232	1-161-494-00	CERAMIC 0.022uF 25V	(★:A)
C1233	1-161-494-00	CERAMIC 0.022uF 25V	(★:A)
C1251	1-124-257-00	ELECT 2.2uF 20% 50V	
C1252	1-162-286-31	CERAMIC 220PF 10% 50V	(EXCEPT ★:A)
C1252	1-162-290-31	CERAMIC 470PF 10% 50V	(★:A)

POWER AMPLIFIER

POWER SUPPLY

Ref. No.	Part No.	Description	Remarks
C1253	1-162-286-31	CERAMIC 220PF 10% 50V	(EXCEPT ★:A)
C1253	1-162-292-31	CERAMIC 680PF 10% 50V	(★:A)
C1254	1-124-477-11	ELECT 47uF 20% 25V	
C1255	1-124-910-11	ELECT 47uF 20% 50V	
C1256	1-124-122-11	ELECT 100uF 20% 50V	
C1257	1-136-165-00	FILM 0.1uF 5% 50V	
C1260	1-136-163-00	FILM 0.068uF 5% 50V	
C1261	1-136-163-00	FILM 0.068uF 5% 50V	
C1280	1-161-494-00	CERAMIC 0.022uF 25V	(★:A)

< CONNECTOR >

- * CN1201 1-564-518-11 PLUG, CONNECTOR 3P
- * CN1202 1-564-522-11 PLUG, CONNECTOR 7P

< DIODE >

D1201	8-719-987-63	DIODE 1N4148M	
D1251	8-719-987-63	DIODE 1N4148M	

< IC >

IC1201	8-749-900-24	IC STK-4162MK2 (A27, *11)	
IC1201	8-749-900-96	IC STK-4142MK2 (D209, *8, 9, 10)	

< COIL >

L1221	1-420-872-00	COIL, AIR CORE	
L1251	1-420-872-00	COIL, AIR CORE	

< TRANSISTOR >

Q1201	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q1202	8-729-900-80	TRANSISTOR DTC114ES	
Q1203	8-729-620-05	TRANSISTOR 2SC2603-EF (*2, D259)	
Q1203	8-729-119-78	TRANSISTOR 2SC2785-HFE (*1, D209)	
Q1251	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	

< RESISTOR >

R1201	1-249-417-11	CARBON 1K 5% 1/4W F	
R1202	1-249-438-11	CARBON 56K 5% 1/4W	
R1203	1-249-417-11	CARBON 1K 5% 1/4W F	
R1204	1-249-438-11	CARBON 56K 5% 1/4W	
R1205	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1206	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1207	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1208	1-249-425-11	CARBON 4.7K 5% 1/4W F	
△R1209	1-212-881-11	FUSIBLE 100 5% 1/4W F	
△R1210	1-217-151-00	RES, METAL PLATE 0.22	
R1211	1-249-417-11	CARBON 1K 5% 1/4W F	
R1212	1-249-431-11	CARBON 15K 5% 1/4W	
R1213	1-249-441-11	CARBON 100K 5% 1/4W	
R1214	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1215	1-249-421-11	CARBON 2.2K 5% 1/4W F	

Ref. No.	Part No.	Description	Remarks
R1216	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1217	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1218	1-249-397-11	CARBON 22 5% 1/4W F	
R1219	1-249-397-11	CARBON 22 5% 1/4W F	
R1220	1-249-397-11	CARBON 22 5% 1/4W F	
R1221	1-249-397-11	CARBON 22 5% 1/4W F	
R1227	1-249-429-11	CARBON 10K 5% 1/4W	
R1228	1-247-881-00	CARBON 120K 5% 1/4W	
R1229	1-249-439-11	CARBON 68K 5% 1/4W	
R1230	1-249-439-11	CARBON 68K 5% 1/4W	
R1231	1-249-417-11	CARBON 1K 5% 1/4W F	
R1232	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R1238	1-249-433-11	CARBON 22K 5% 1/4W	
R1239	1-249-426-11	CARBON 5.6K 5% 1/4W	
R1241	1-249-383-81	CARBON 1.5 5% 1/4W F (*3, 5, 7)	
R1251	1-249-417-11	CARBON 1K 5% 1/4W F	
R1252	1-249-438-11	CARBON 56K 5% 1/4W	
R1253	1-249-417-11	CARBON 1K 5% 1/4W F	
R1254	1-249-438-11	CARBON 56K 5% 1/4W	
R1255	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1256	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1257	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1258	1-249-425-11	CARBON 4.7K 5% 1/4W F	
△R1259	1-212-881-11	FUSIBLE 100 5% 1/4W F	
△R1260	1-217-151-00	RES, METAL PLATE 0.22	
R1261	1-249-417-11	CARBON 1K 5% 1/4W F	
R1262	1-249-431-11	CARBON 15K 5% 1/4W	
R1263	1-249-441-11	CARBON 100K 5% 1/4W	
R1268	1-249-397-11	CARBON 22 5% 1/4W F	
R1269	1-249-397-11	CARBON 22 5% 1/4W F	
R1270	1-249-397-11	CARBON 22 5% 1/4W F	
R1271	1-249-397-11	CARBON 22 5% 1/4W F	

- * 1-646-474-11 POWER SUPPLY BOARD

< CAPACITOR >

C1301	1-161-744-00	CERAMIC 0.01uF 400V	
C1314	1-124-122-11	ELECT 100uF 20% 50V	
C1315	1-124-927-11	ELECT 4.7uF 20% 100V	
C1316	1-124-910-11	ELECT 47uF 20% 50V	
C1318	1-124-636-00	ELECT 3300uF 20% 25V	
C1348	1-164-159-11	CERAMIC 0.1uF 50V	(*4, 5, 6, 7, D259)
C1362	1-124-916-11	ELECT 22uF 20% 63V	

Note:

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

POWER SUPPLY

Ref. No.	Part No.	Description	Remarks
< CONNECTOR >			
* CN1301	1-564-321-00	PIN, CONNECTOR 2P	
CN1311	1-506-468-11	PIN, CONNECTOR 3P	
< DIODE >			
D1307	8-719-002-60	DIODE UZL-33L	
D1309	8-719-014-66	DIODE UZP-5.6B	
D1311	8-719-200-82	DIODE 11ES2	
D1370	8-719-200-82	DIODE 11ES2	
D1321	8-719-987-63	DIODE 1N4148M	
D1322	8-719-987-63	DIODE 1N4148M	
D1354	8-719-200-82	DIODE 11ES2	
D1355	8-719-200-82	DIODE 11ES2	
< TRANSISTOR >			
Q1301	8-729-141-83	TRANSISTOR 2SA473	
< RESISTOR >			
R1303	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1304	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R1391	1-202-725-00	SOLID 3.3M 10% 1/2W (*11)	
< RELAY >			
RY1301	1-515-720-11	RELAY	
RY1301	1-515-738-11	RELAY, POWER	
< TRANSFORMER >			
△T1302	1-449-723-31	TRANSFORMER, POWER (EXCEPT *11)	
△T1302	1-450-786-11	TRANSFORMER, POWER (*11)	
< VOLTAGE SELECTION >			
△VS1301	1-572-266-11	SWITCH, VOLTAGE SELECTION (A27)	

MISCELLANEOUS			

18	1-590-578-11	WIRE, FLAT TYPE (19 CORE)	
19	1-590-576-11	WIRE, FLAT TYPE (11 CORE)	
19	1-590-576-21	WIRE, FLAT TYPE (11 CORE) (D209)	
△64	1-575-651-11	CORD, POWER (*4, 5, 6, 7, 8, 9)	
△64	1-575-653-11	CORD, POWER (A27:E)	
△64	1-690-608-11	CORD, POWER (A27:AU2)	
△64	1-690-609-21	CORD, POWER (*11)	
△64	1-696-570-21	CORD, POWER (*3, 10)	
△64	1-696-848-21	CORD, POWER (*1)	
△F1301	1-532-350-00	FUSE 4A (A27, D209, *9, 10)	
△F1301	1-576-108-11	FUSE 4A (*8, 11)	
△F1302	1-532-350-00	FUSE 4A (A27, D209, *9, 10)	
△F1302	1-576-108-11	FUSE 4A (*8, 11)	

Ref. No.	Part No.	Description	Remarks
△F1303	1-532-203-00	FUSE 2A (D209, *9, 10)	
△F1303	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1303	1-576-104-11	FUSE 2A (*8)	
△F1304	1-532-203-00	FUSE 2A (D209, *9, 10)	
△F1304	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1304	1-576-104-11	FUSE 2A (*8)	
△F1305	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1305	1-576-105-11	FUSE 2.5A (*8, 11)	
△F1306	1-532-286-00	FUSE 2.5A (A27, D209, *9, 10)	
△F1306	1-576-105-11	FUSE 2.5A (*8, 11)	
△T1301	1-423-431-11	TRANSFORMER, POWER (*11)	
△T1301	1-423-437-11	TRANSFORMER, POWER (D209)	
△T1301	1-423-437-21	TRANSFORMER, POWER (*8, 9, 10)	
△T1301	1-423-438-11	TRANSFORMER, POWER (*1)	
△T1301	1-423-438-21	TRANSFORMER, POWER (*2)	

ACCESSORIES & PACKING MATERIALS			

	1-465-963-11	COMMANDER, STANDARD (RM-S271)	
	1-501-374-11	ANTENNA, LOOP (*4, 5, 7, 8, D259:AE2)	
	1-501-536-11	ANTENNA (*4, 5, 7, 8, D259:AE2)	
*	1-696-860-11	CORD, CONNECTION 13P (*4, 5, 7, 8, D259:AE2)	
*	3-703-713-41	STICKER, SONY SYMBOL (10)	
	3-707-584-01	COVER, BATTERY	
	3-756-331-41	MANUAL, INSTRUCTION (ENGLISH/FRENCH/ SPANISH/PORTUGUESE) (D209:AE2)	
	3-756-331-51	MANUAL, INSTRUCTION (GERMANY/DUTCH/ SWEDISH/ITALIAN) (D209:AE2, *4)	
	3-756-331-61	MANUAL, INSTRUCTION (DANISH/FINNISH) (*5)	
	3-756-333-41	MANUAL, INSTRUCTION (ENGLISH/FRENCH/ SPANISH/PORTUGUESE) (D259:AE2)	
	3-756-333-51	MANUAL, INSTRUCTION (GERMANY/DUTCH/ SWEDISH/ITALIAN) (D259:AE2, *8)	
*	4-956-903-01	INDIVIDUAL CARTON (D209:AE2, *4)	
*	4-958-606-01	CUSHION (D209:AE2, *4)	

HARDWARE LIST			

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	

Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

HTC-D259/D359

SERVICE MANUAL



HTC-D259 is the compact disc deck in LBT-A27CDM / D259CD.

HTC-D359 is the compact disc deck in LBT-A37CDM / D359CD.

Canadian Model
HTC-D259

AEP Model

UK Model

E Model

Australian Model

HTC-D259/D359

PX Model

HTC-D359

Photo: HTC-D359

SPECIFICATIONS

Cassette deck

Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF With Type II cassette (Sony UX-S) 40 Hz to 14 kHz (± 3 dB) With Type I cassette (Sony HF-S) 40 Hz to 13 kHz (± 3 dB)
Wow and flutter	0.1% (WRMS)

Compact disc player

Laser	Semiconducotr laser
Wavelength	780 - 790 nm
Frequency response	2 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio	More than 93 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.008% (1 kHz)
Channel separation	More than 90 dB (1 kHz)


General

Mass	Approx. 6.9 kg
Dimensions	Approx. 355 \times 225 \times 385 mm (w/h/d, including projections)

Speaker systems (SS-D270)

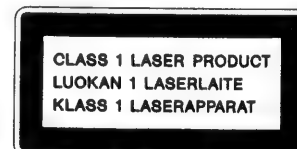
Speaker system	2-way
Mass	Approx. 6.3 kg, per speaker
Dimensions	Approx. 260 \times 505 \times 210 mm (w/h/d)

Design and specifications are subject to change without notice.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

CD Section	Model Name Using Similar Mechanism	HCD-H150/H500
	Base Unit Name	BU-5BD3
DECK Section	Model Name Using Similar Mechanism	HCD-H170 / H170K/H700
	Tape Transport Mechanism Type	DECK A TCM-190RA12CL DECK B TCM-190RB22CL

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

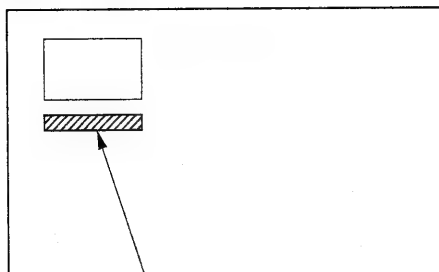
The following caution label is located inside the unit.

CAUTION	: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	: USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	: AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSATEILYLLE.
VARNING	: LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL	: USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.

COMPACT DISC DECK
SONY[®]

MODEL IDENTIFICATION

Back Panel



4-955-832-01: HTC-D259
4-955-832-11: HTC-D359

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

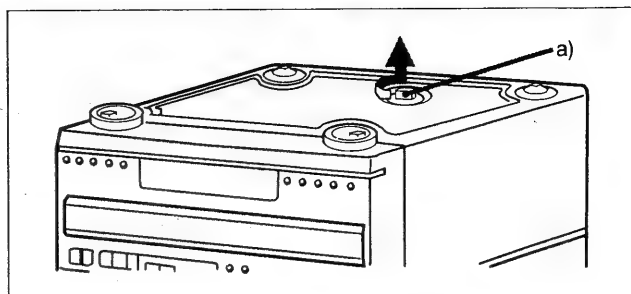
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Note on the Transit key



The transit key (a) on the bottom exterior of the CD player protects the optical system against shock during transportation. Before operating the unit, be sure to remove the key by following the instructions on the label, and store it in a safe place. When transporting the unit, put the key to its original position and lock it in place.

TABLE OF CONTENTS

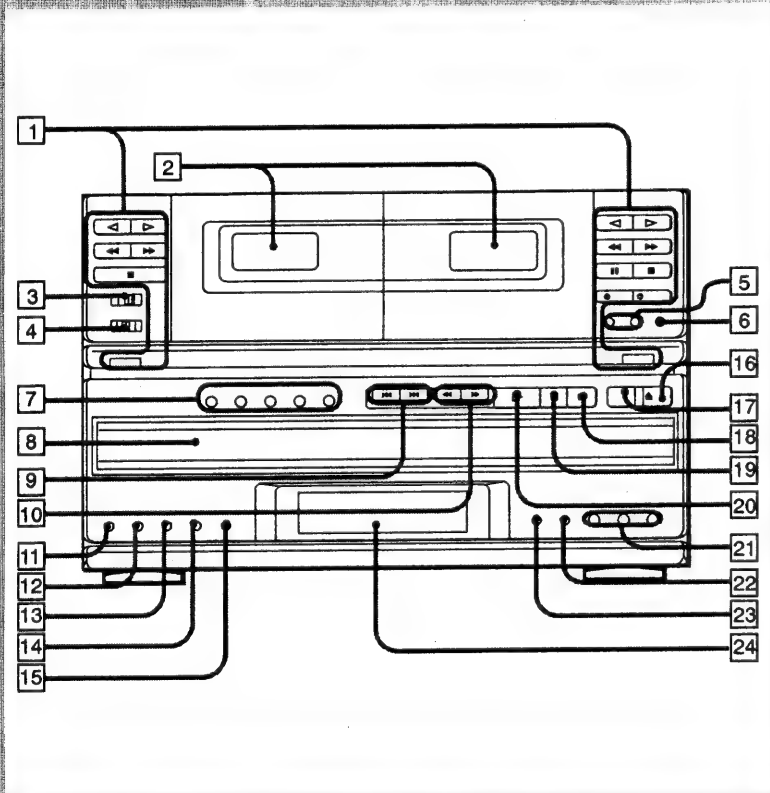
<u>Section</u>	<u>Title</u>	<u>Page</u>
	Specifications	1
	Notes on Handling the Optical Pick-up Block or Base Unit	2
	Notes on Laser Diode Emission Check	2
	Note on the Transit Key	2
1.	GENERAL	3
2.	ADJUSTMENTS	
2-1.	Mechanical Adjustments	4
2-2.	Electrical Adjustments	4
	Cassette Deck Section	4
	CD Section	7
3.	DIAGRAMS	
3-1.	CD Section Block Diagram	9
3-2.	Cassette Deck Section Block Diagram	11
3-3.	CD Section Printed Wiring Boards	14
3-4.	CD Section Schematic Diagram	17
3-5.	Cassette Deck Section Schematic Diagram	22
3-6.	Cassette Deck Section Printed Wiring Boards ..	27
4.	EXPLODED VIEWS	31
5.	ELECTRICAL PARTS LIST	38

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

This section is extracted from instruction manual.

SECTION 1 GENERAL



Location of Controls

Cassette Deck

- 1 Tape operation buttons
 - ◀◀ Leftward fast winding/AMS*
 - ▶▶ Rightward fast winding/AMS*
 - ▶ Forward play
 - ◀ Reverse play
 - Stop
 - ▲ EJECT
 - || PAUSE (deck B only)
 - REC MUTE (record muting) (deck B only)
 - REC (record) (deck B only)
- 2 Cassette holders
- 3 DOLBY NR (noise reduction) switch (32, 82)
- 4 DIRECTION MODE selector (28, 32, 38, 82)
- 5 DUBBING SPEED (HIGH/NORMAL) button (38, 40)
- 6 CD SYNCHRO button (82, 86) (HTC-D359)

Compact Disc Player

- 7 DISC 1 – 5 buttons (42, 46, 50, 52, 54)
- 8 Disc tray
- 9 ◀◀/▶▶ (AMS*) buttons (46, 52, 54, 88, 96)
- 10 ◀◀/▶▶ (manual search) buttons (48, 88, 96)
- 11 TIME button (44)
- 12 FADER button (94)
- 13 EDIT/TIME FADE button (88, 94)
- 14 CHECK (program check) button (54)
- 15 CLEAR (program clear) button (56)
- 16 ▲ OPEN/CLOSE button (42)
- 17 DISC SKIP button (42, 46)
- 18 ■ (stop) button (42)
- 19 || (pause) button (42)
- 20 ▶ (play) button (42)
- 21 PLAY MODE button
 - PROGRAM button (52, 86)
 - SHUFFLE button (50)
 - CONTINUE button (42)
- 22 MUSIC SCAN button (58)
- 23 REPEAT button (60)
- 24 Display window

* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2 ADJUSTMENTS

2-1. MECHANICAL ADJUSTMENTS

Precautions:

1. Clean the following parts with a denatured-alcoholmoistened swab;
 - record/playback/erase head
 - pinch roller rubber belts
 - capstan idler
2. Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 to 60g · cm (0.49 to 0.83 oz · inch)
FWD Back tension	CQ-102C	2 to 6g · cm (0.03 to 0.08 oz · inch)
REV	CQ-102RC	35 to 60g · cm (0.49 to 0.83 oz · inch)
REV Back tension	CQ-102RC	2 to 6g · cm (0.03 to 0.08 oz · inch)
FF, REW	CQ-201B	70 to 110g · cm (0.98 to 1.52 oz · inch)

Chucking Arm Height Adjustment

This Adjustment should be performed after the electrical adjustment and on replacing adjusting screw, magnet, or chucking pulley.

Procedure :

1. Set disc (YEDS-18) to the optical pick-up block. (Fig. A)
2. Adjust the bracket (press pulley) to the center of the magnet with adjusting screw. (Fig. B)

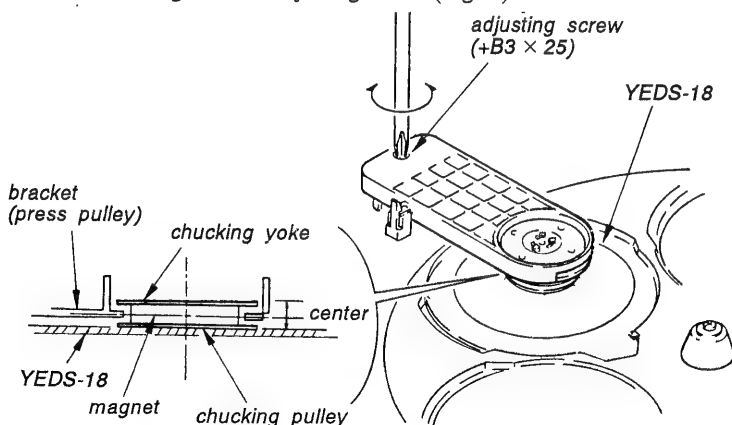


Fig. B

Fig. A

2-2. ELECTRICAL ADJUSTMENTS

0 dB=0.775 V (AF)

Precautions:

CASSETTE DECK SECTION

1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
 2. Do not use a magnetized screwdriver for the adjustments.
 3. After the adjustments, apply suitable locking compound to the parts adjusted.
 4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
 5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
 6. The adjustments should be performed for both L-CH and R-CH.
- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch : OFF

TAPE : TYPE I

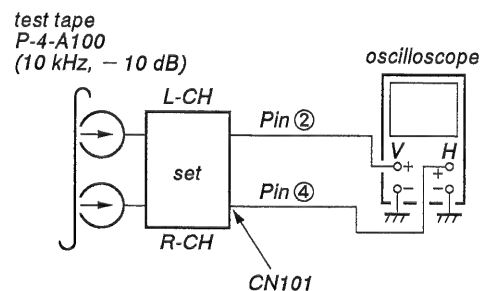
Type	Signal	Used for
P-4-A100	6.3kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

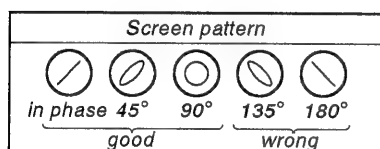
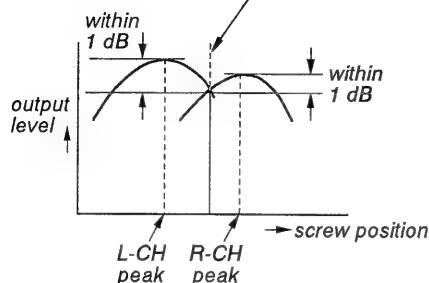
Note : Perform this adjustments for both decks.

Procedure :

1. Mode : FWD playback

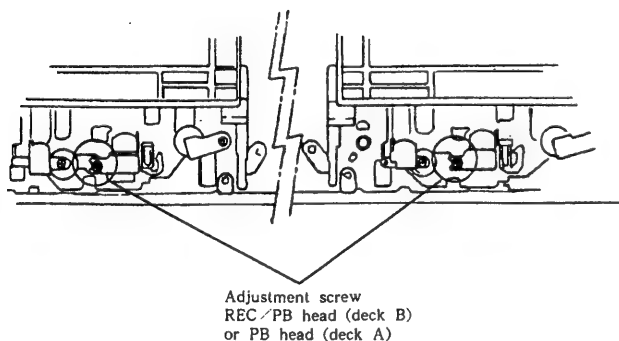


- Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



- After the adjustments, apply suitable locking compound to the parts adjusted.

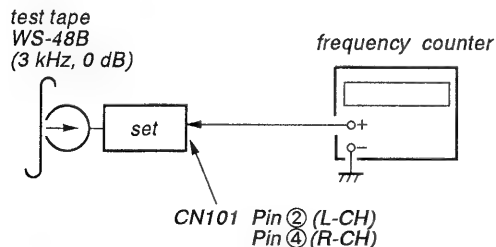
Adjustment Location :



Tape Speed Adjustment. DECK A DECK B

Procedure :

Mode : playback



- High speed adjustment (Must be first Adjustment B deck)
 - Push HIGH speed button.
 - Adjust RV71 so that the frequency counter reads $6,000 \pm 30\text{Hz}$.

NORMAL speed adjustment

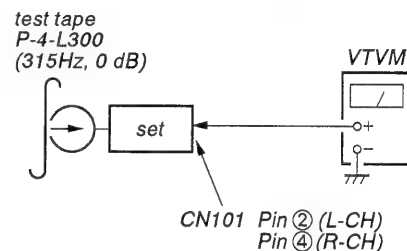
- Push NORMAL speed button.
- Adjust RV72 so that the frequency counter reads $3,000 \pm 15\text{Hz}$.

(See right for Adjusting Parts Location)

Frequency difference between deck A and deck B the beginning of the tape should be within 1%.

Playback Level Adjustment DECK A DECK B

Procedure :



Mode : FWD playback

DECK-A side RV11 (L-CH), RV21 (R-CH)

DECK-B side RV11 (L-CH), RV21 (R-CH)

so that the limits below are satisfied.

Adjustable limits :

CN101 level : $-7.7 \pm 0.5\text{dB}$ (0.48 – 0.67V)

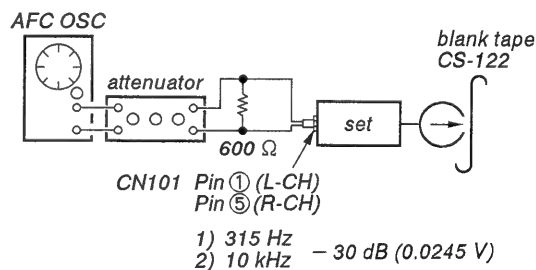
level difference between the channels : within 1.0dB

(See right for Adjusting Parts Location)

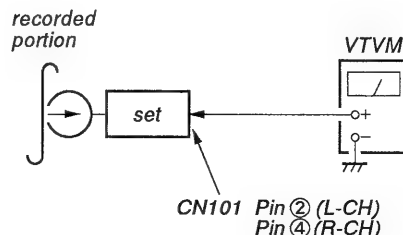
Record BIAS Current Adjustment DECK B

Procedure :

- Mode : record



- Mode : Playback



Playback the signal recorder in step 1.

Confirm that the 10kHz playback output is $0 \pm 0.5\text{dB}$ relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

(See right for Adjusting Parts Location)

Record Level Adjustment **DECK B**

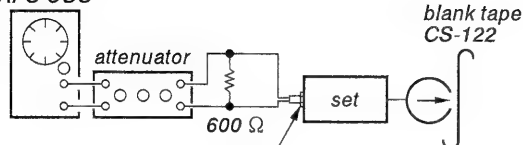
Setting :

TAPE : TYPE I

Procedure :

1. Mode : record

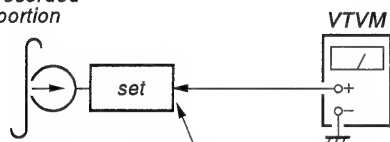
AFC OSC



CN101 Pin ① (L-CH)
Pin ⑤ (R-CH)
315 Hz, - 30 dB (0.0245 V)

2. Mode : playback

recorded
portion



CN101 Pin ② (L-CH)
Pin ④ (R-CH)

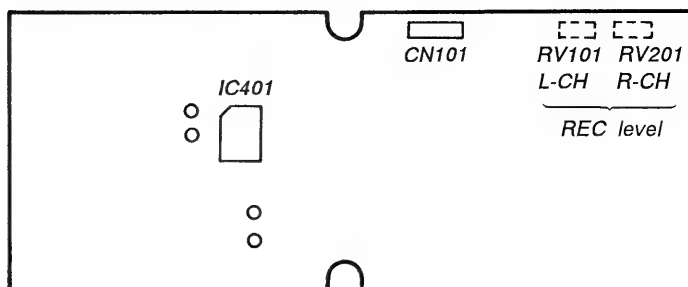
3. Playback the signal recorded in step 1.
Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1-3.

Adjustable : - 30.0 ± 0.5dB (0.0231 - 0.026V)

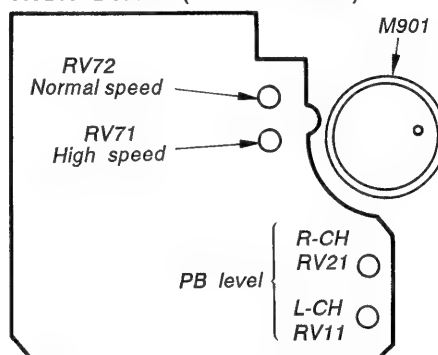
(See right for Adjusting Parts Location)

• Adjusting Parts Location

TC MAIN BOARD (Conductor Side)



AUDIO BOARD (Conductor Side)

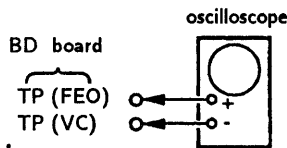


CD SECTION

Note :

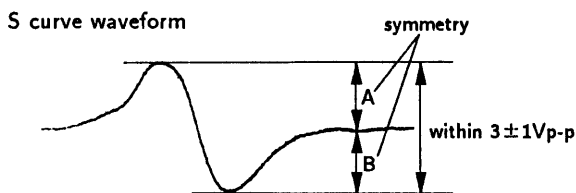
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than $10M\Omega$ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within $3\pm 1V_{p-p}$.

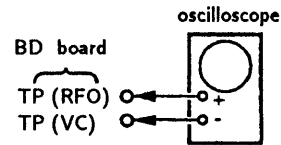


5. After check, remove the lead wire connected in step 2.

Note :

- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

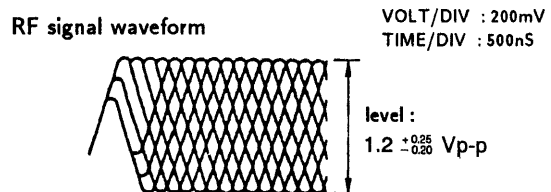


Procedure :

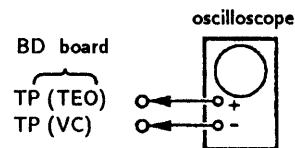
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

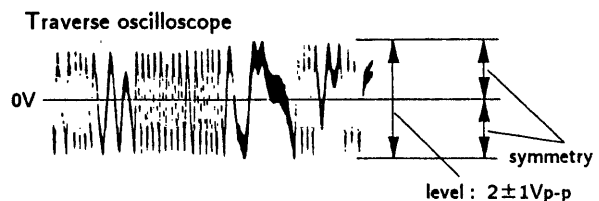


E-F Balance Check



Procedure :

1. Connect test point TP (TEST) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

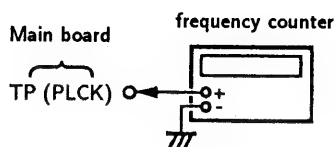


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

Focus/Tracking Gain

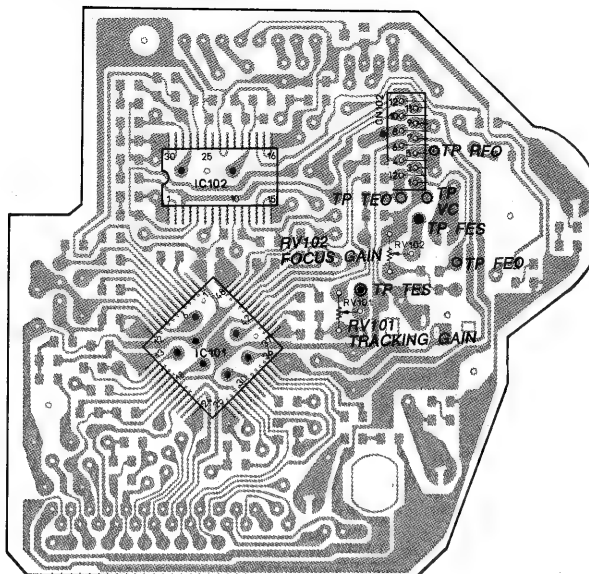
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

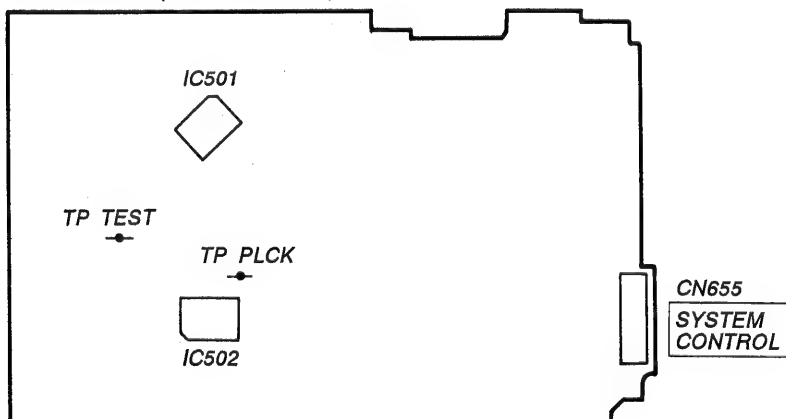
Adjustment Locations : [BD board]

— conductor side —



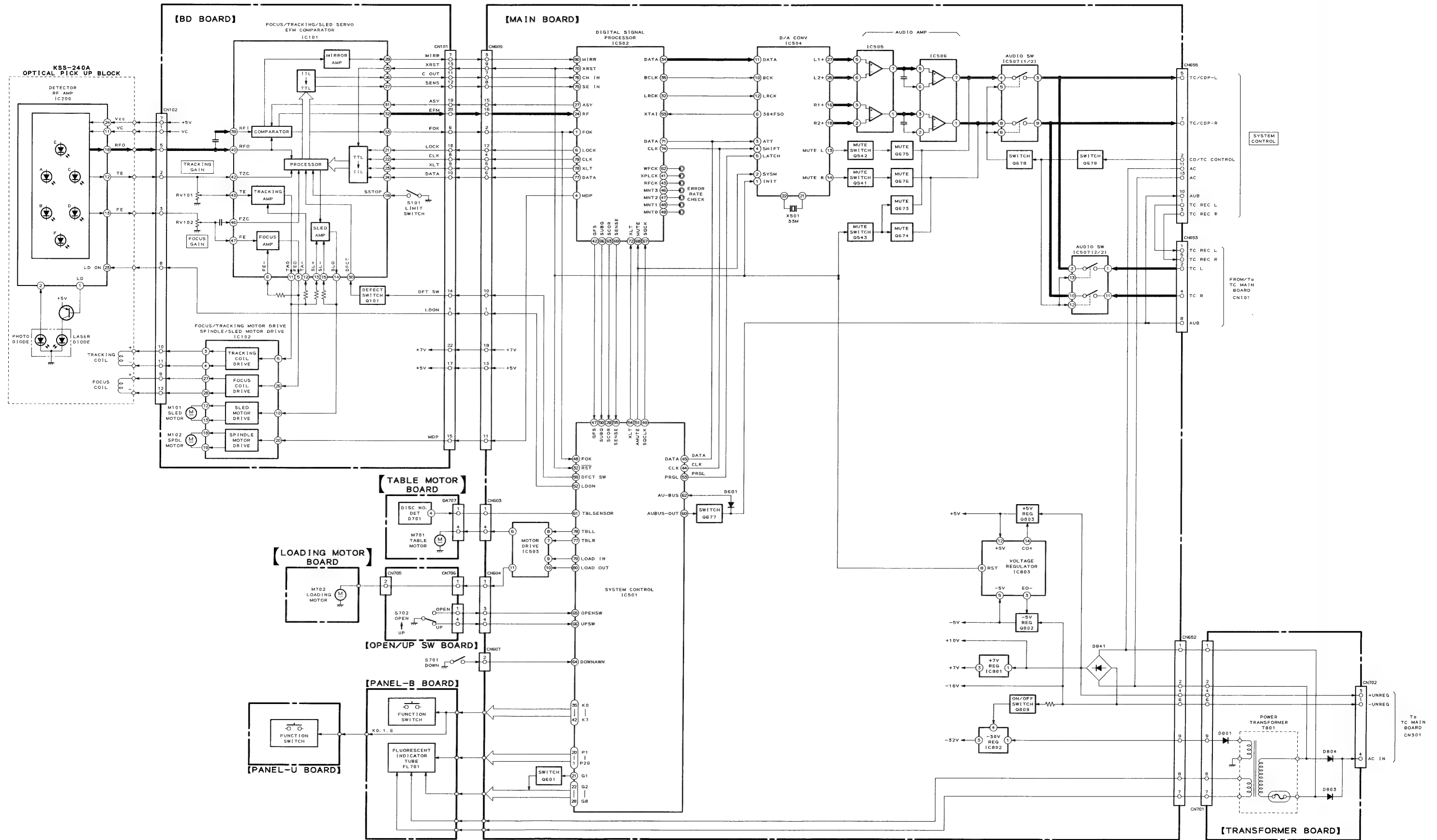
Adjustment Location ;

MAIN BOARD (Conductor Side)

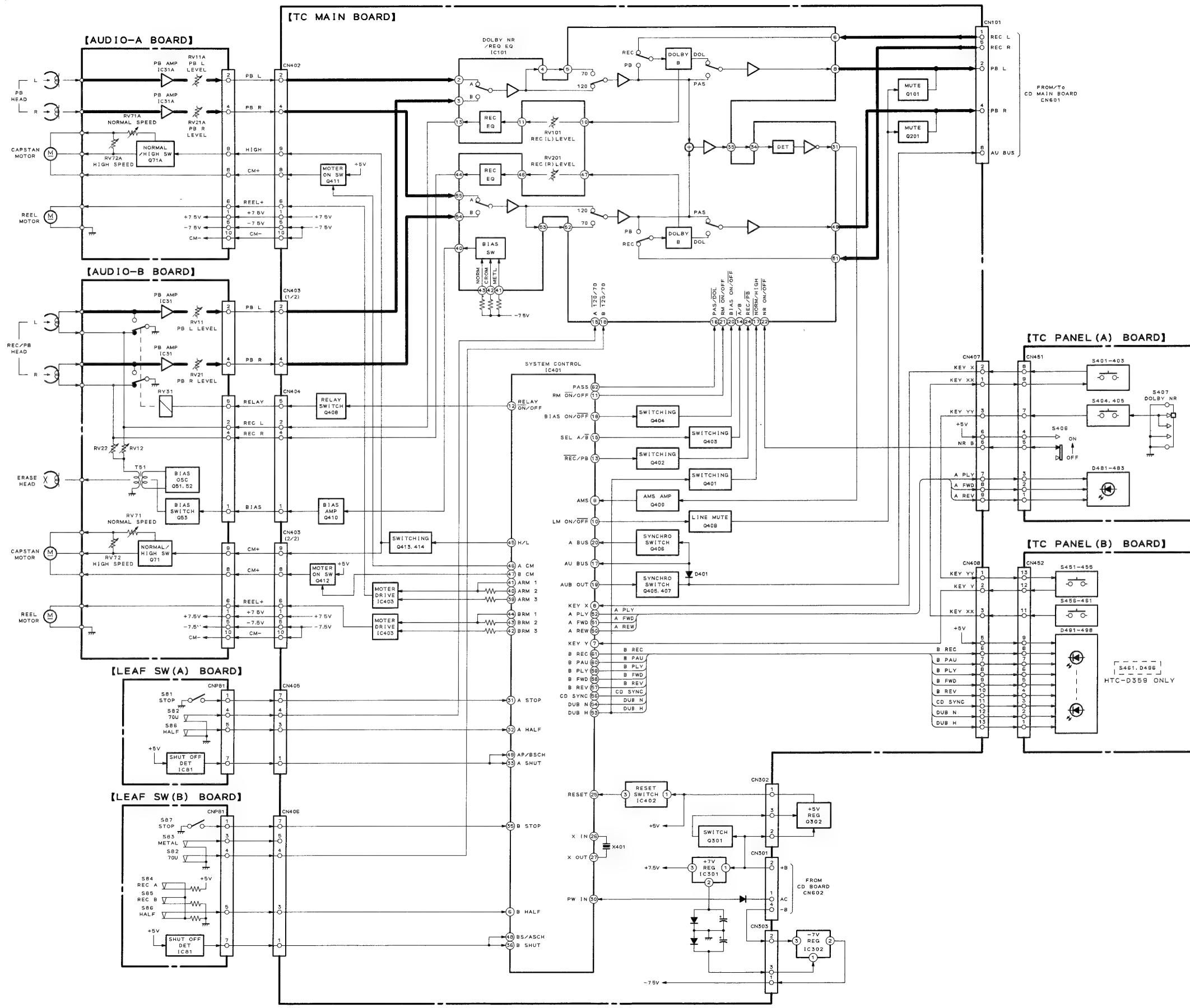


SECTION 3 DIAGRAMS

3-1. CD SECTION BLOCK DIAGRAM

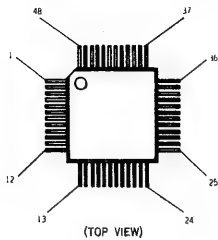


3-2. CASSETTE DECK SECTION BLOCK DIAGRAM

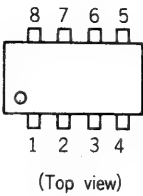


Semiconductor Lead Layouts

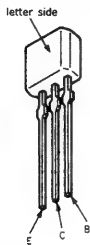
CXA1372AQ



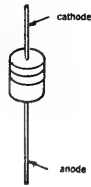
M5218AP



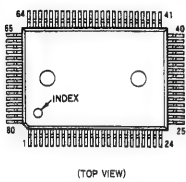
2SA1175-HFE
2SC3623A-LK



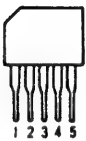
HZS7C2L
UZL-7L1
UZL-7L2
UZ-2.7BS
11ES2



CXD2500BQ
CXP50120-024Q



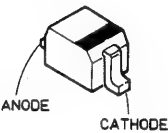
M5293L



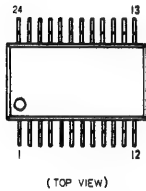
2SB1013-4



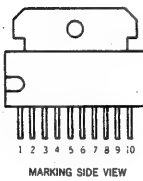
MA110



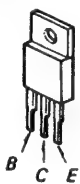
CXD2565M



TA7272P



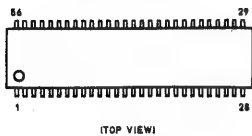
2SB1094-LK



NJL5165K-B



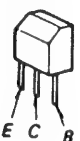
HA12171NT



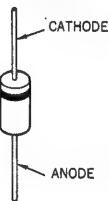
TA7807S



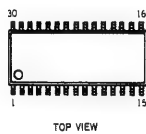
2SD774-34



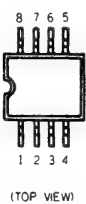
1N4148M



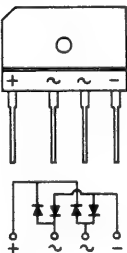
LA6532M



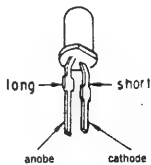
μ PC4570G2



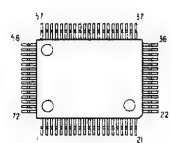
D2SB20



SEL2210S-CD
SEL2410E-TH10



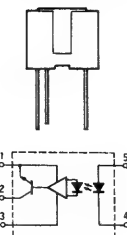
M50964-256FP



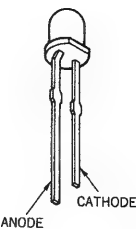
DTA114ES
DTA144ES
DTC144ES
2SC2603-EF



GP-1A521



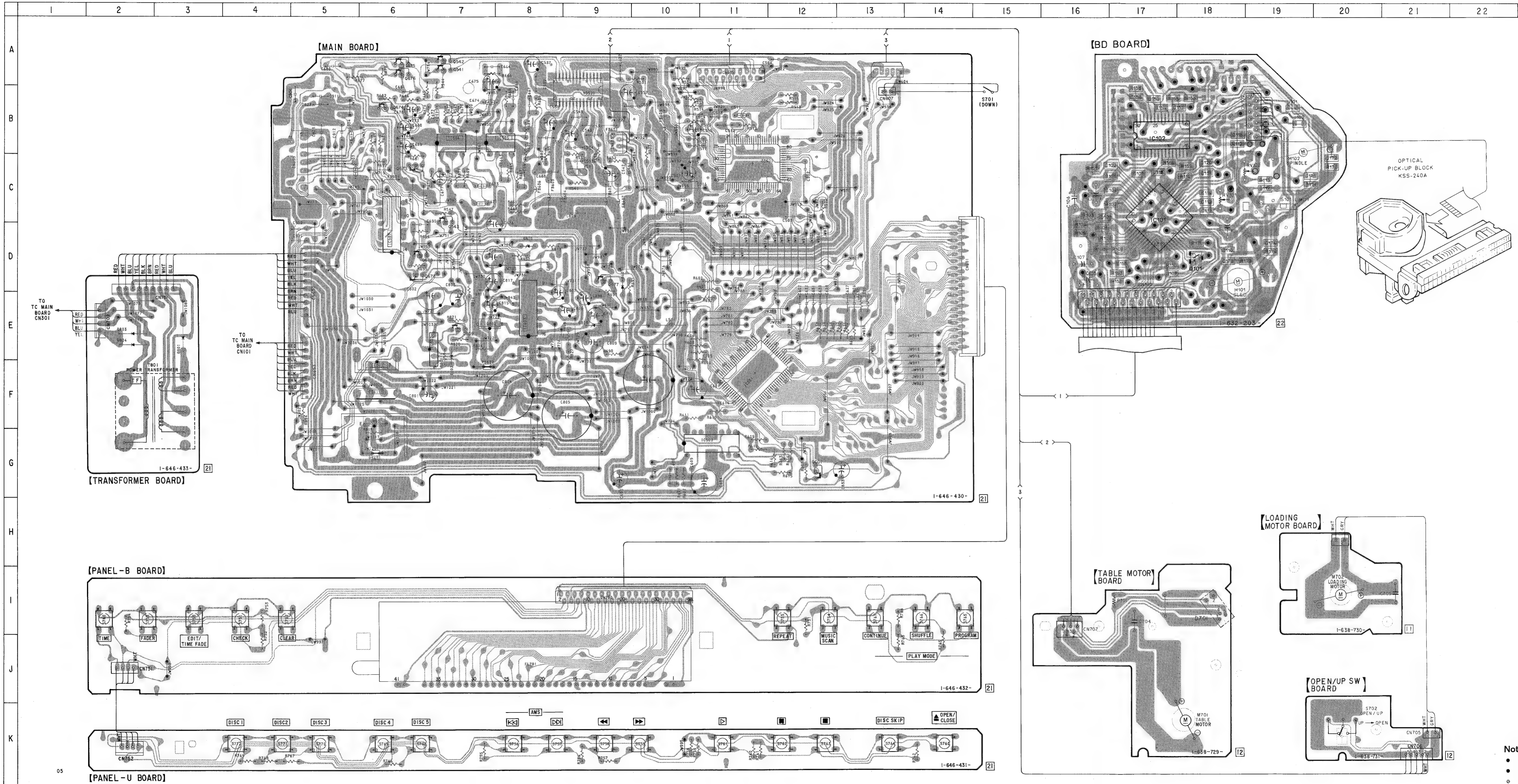
SEL2810A



M51943BSL



3-3. CD SECTION PRINTED WIRING BOARDS



● Semiconductor Location

Ref. No.	Location
D601	D-9
D701	I-18
D801	E-3
D802	E-7
D803	E-2
D804	E-2
D808	E-9
D810	D-8
D811	D-7
D841	F-6
IC101	C-17
IC102	B-17
IC501	F-11
IC502	C-11
IC503	G-11
IC504	B-9
IC505	B-8
IC506	B-7
IC507	D-6
IC801	F-6
IC802	E-7
IC803	E-8

Note on Printed Wiring Board:
● ○ : parts extracted from the component side.
● : Pattern from the side which enables seeing.
○ : Pattern of the rear side.

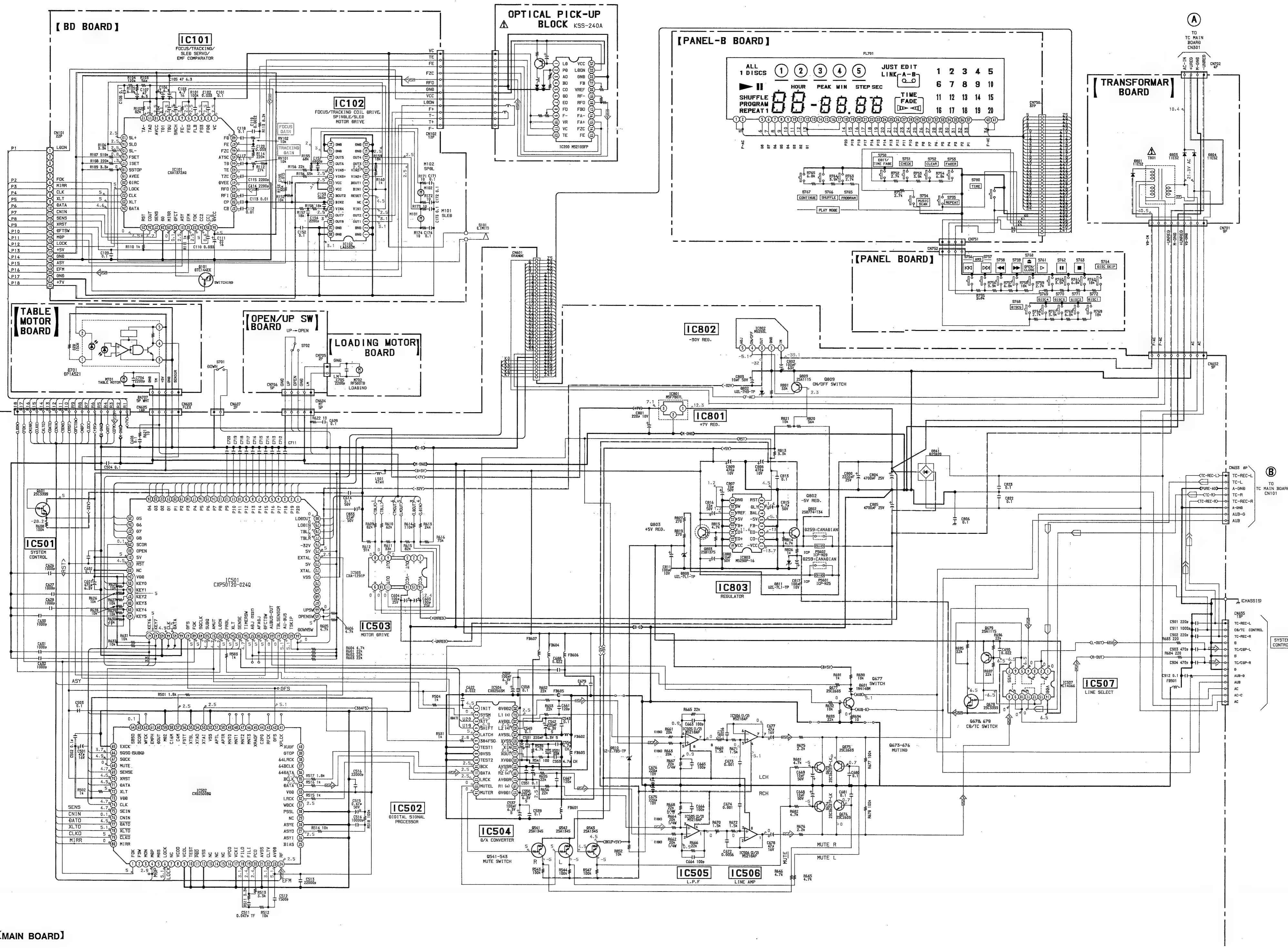
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.

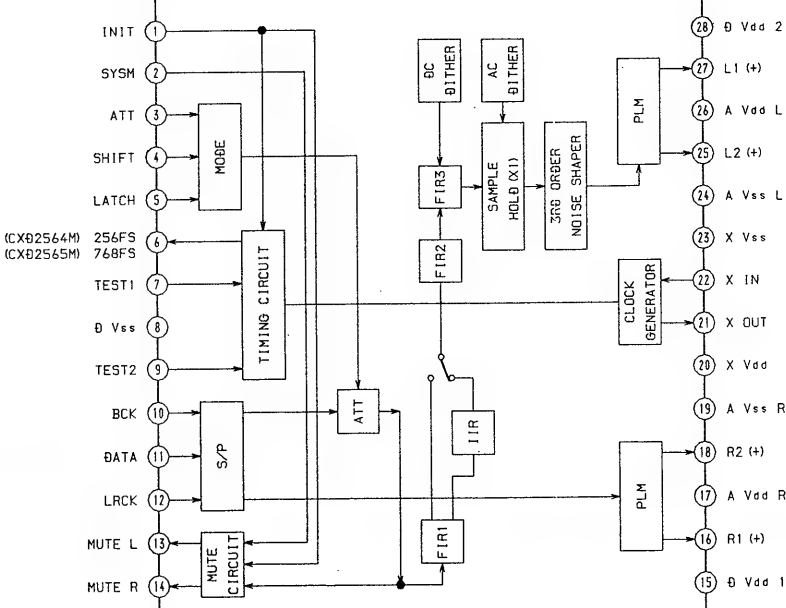
Note:
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

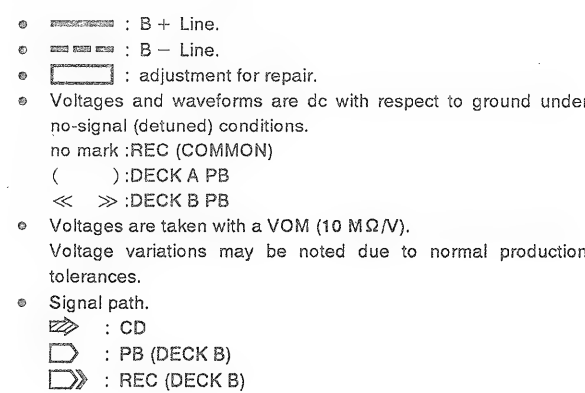
- Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
- Δ : B + Line.
 - Δ : B - Line.
 - Δ : adjustment for repair.
 - Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : CD PLAY (COMMON)
 - () : DECK A PB
 - < > : DECK B PB
 - Voltages are taken with a VOM (10 M Ω /V). Voltage variations may be noted due to normal production tolerances.
 - Signal path.
 - \square : CD
 - \square : PB (DECK B)
 - \square : REC (DECK B)

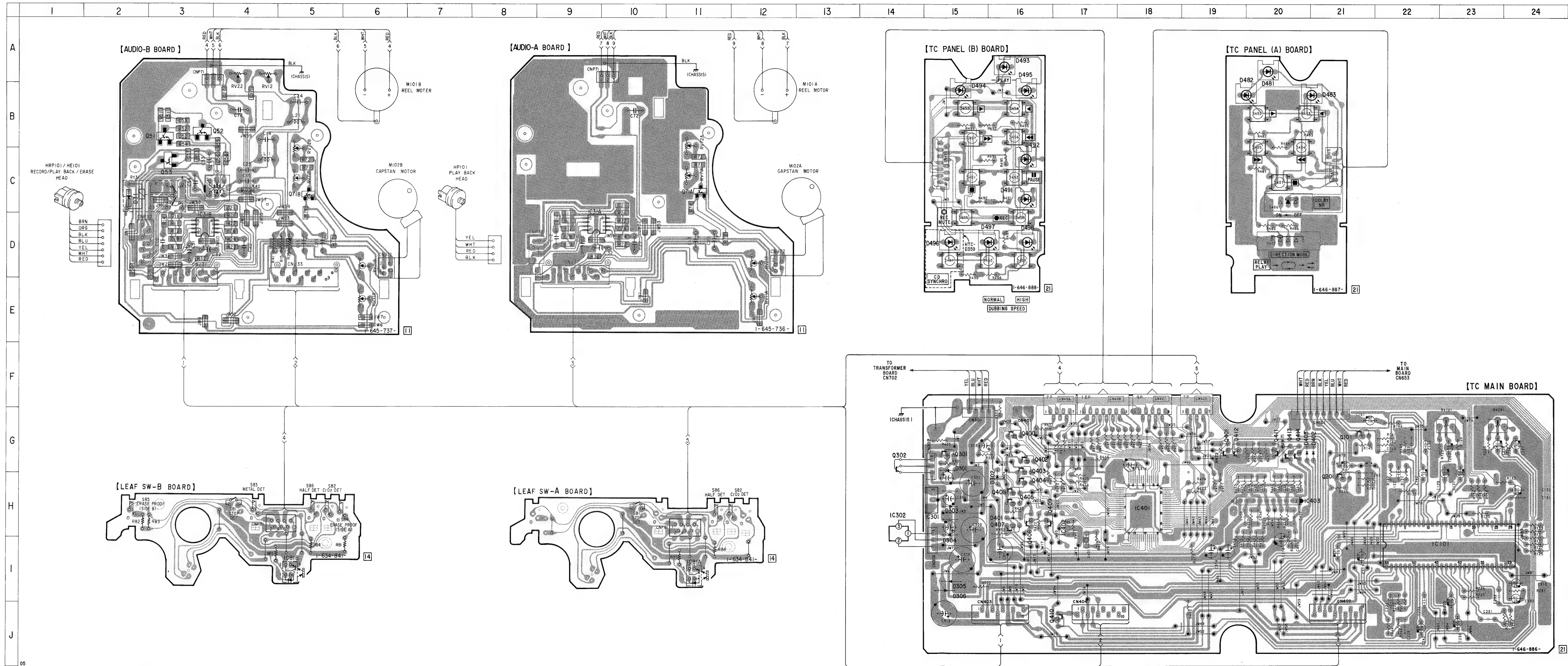
【MAIN BOARD】



IC504 CXD2565M






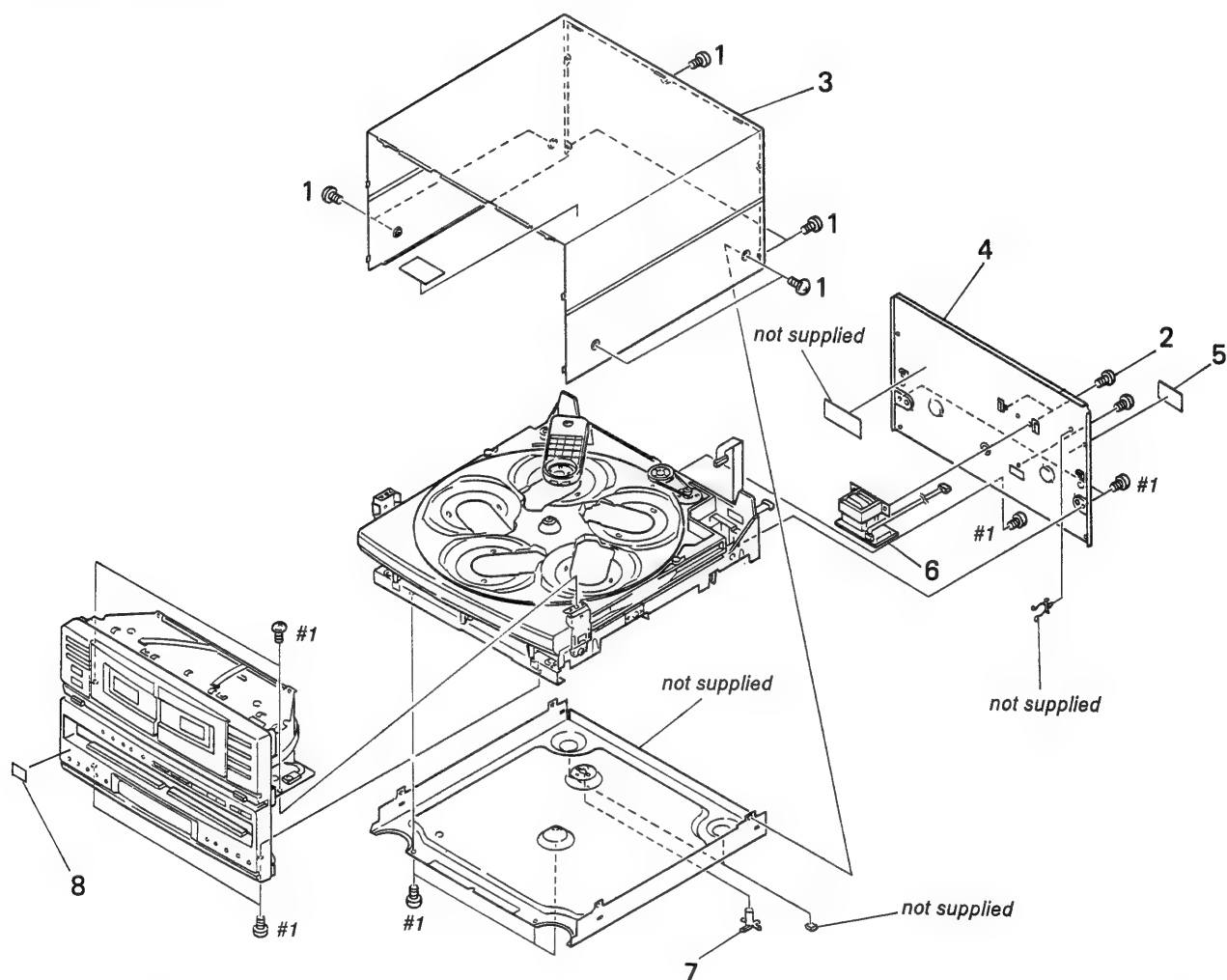


EXPLODED VIEWS

NOTE:

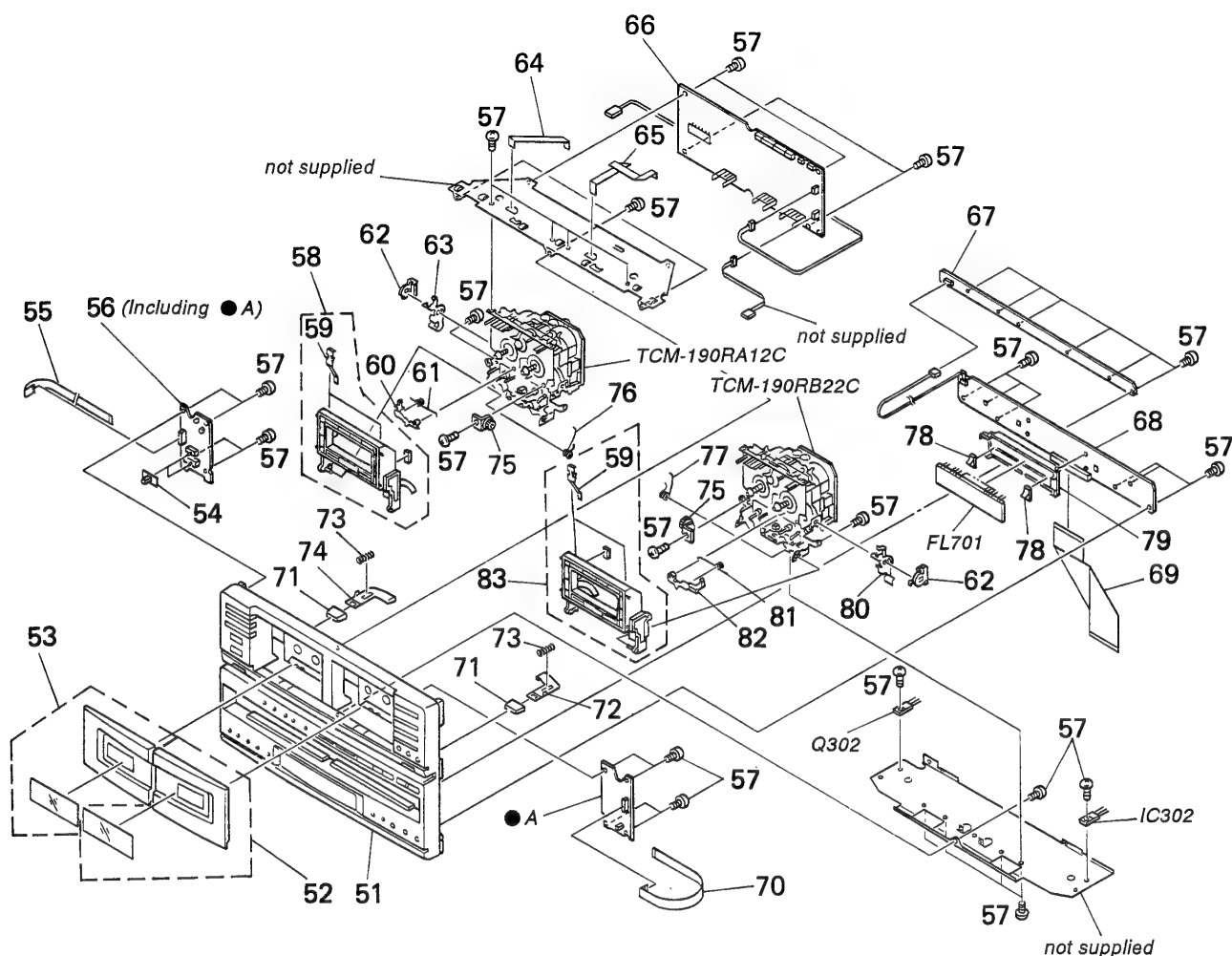
- Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) CASE SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-363-099-01	SCREW (CASE 3 TP2) (D359)		* 5	4-941-548-01	LABEL, CLASS 1	
1	3-704-366-01	SCREW (CASE) (M3X8) (D259)				(D259: AEP, UK, E, IT, AUS, D359)	
2	3-704-515-31	SCREW (BV/RING)		* 6	1-646-433-21	TRANSFORMER BOARD	
* 3	4-955-795-31	CASE		7	4-937-945-01	PLATE (TRANSPORT), LOCK	
* 4	4-955-832-01	PANEL, BACK (D259)		* 8	3-703-713-41	STICKER, SONY SYMBOL (10) (D359)	
* 4	4-955-832-11	PANEL, BACK (D359)					

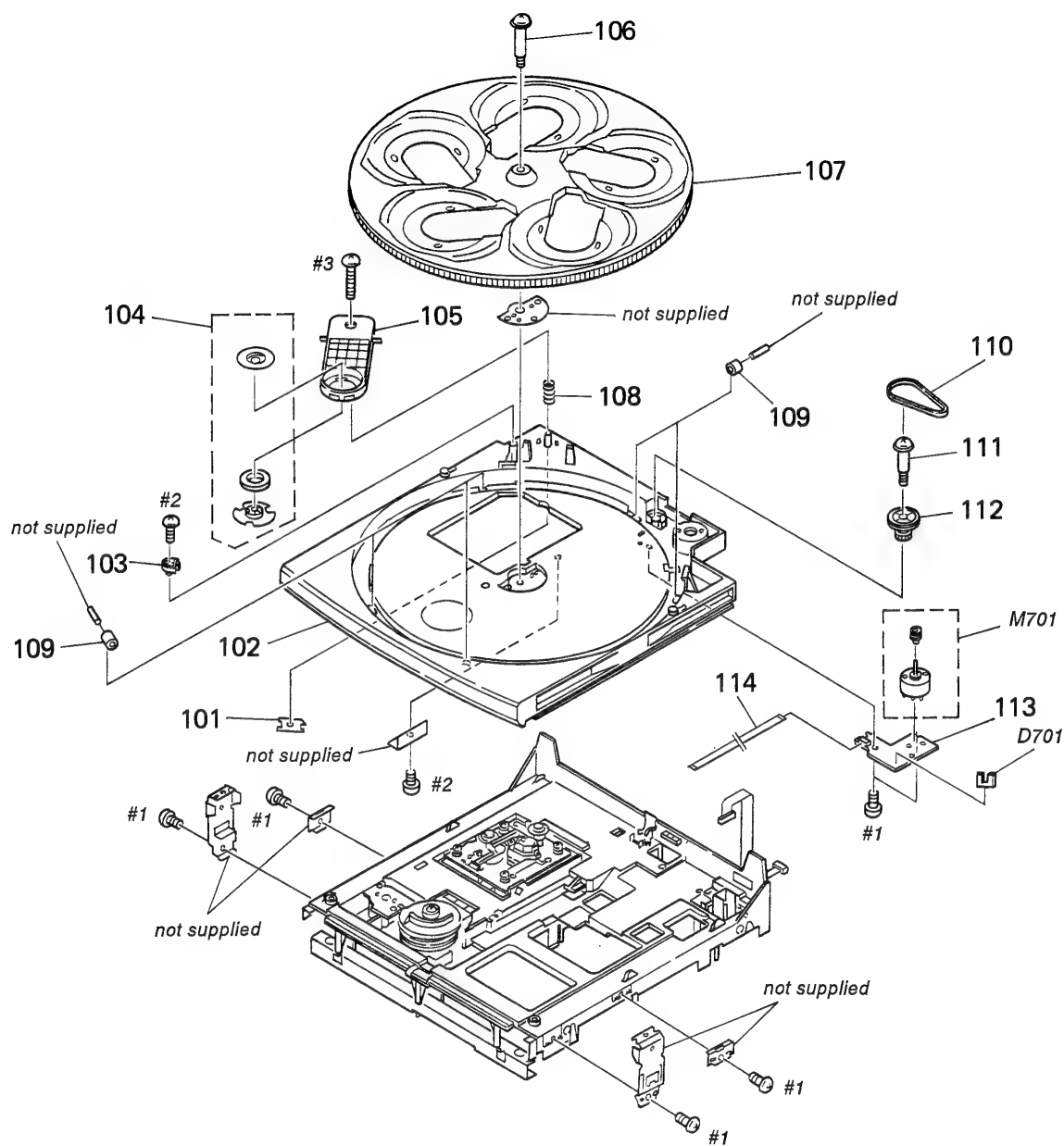
(2) FRONT PANEL ASSEMBLY SECTION



Ref. No.	Part No.	Description	Remark
51	X-4943-306-1	PANEL ASSY, FRONT (D259)	
51	X-4943-307-1	PANEL ASSY, FRONT (D359)	
52	X-4943-311-1	LID (B) ASSY, CASSETTE	
53	X-4943-310-1	LID (A) ASSY, CASSETTE	
54	4-948-273-01	KNOB, SLIDE	
55	1-751-209-11	WIRE, FLAT TYPE (9 CORE) (D259)	
* 56	A-4357-003-A	SW BOARD, COMPLETE (D259)	
* 56	A-4357-196-A	SW BOARD, COMPLETE (D359)	
57	4-951-620-01	SCREW (2.6X8), +BVTP	
58	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	
59	3-308-823-11	SPRING	
60	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
61	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
62	3-354-957-01	JOINT (LOCK LEVER)	
* 63	3-354-953-01	LEVER (LOCK LEVER L)	
64	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
65	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
* 66	A-4356-892-A	TC MAIN BOARD, COMPLETE	
* 67	1-646-431-21	PANEL-U BOARD	
* 68	1-646-432-21	PANEL-B BOARD	

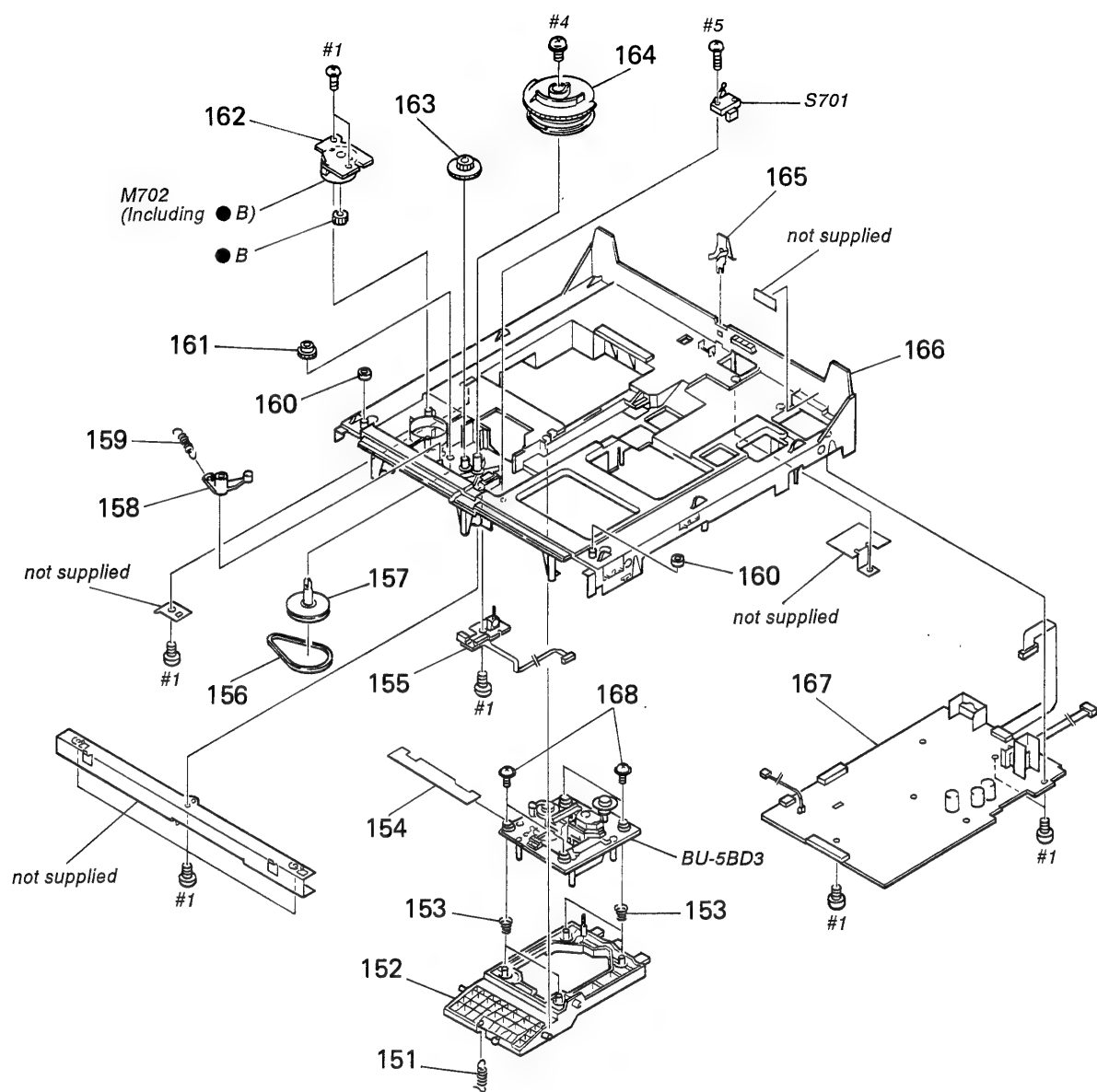
Ref. No.	Part No.	Description	Remark
69	1-751-055-31	WIRE, FLAT TYPE (37 CORE) (D259)	
70	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (D359)	
70	1-751-210-11	WIRE, FLAT TYPE (13 CORE) (D259)	
71	4-935-355-41	BUTTON (EJECT)	
* 72	4-955-821-11	LEVER (R), EJECT	
73	3-500-131-00	SPRING, COMPRESSION	
* 74	4-955-820-11	LEVER (L), EJECT	
75	3-354-963-01	DAMPER	
76	3-354-959-01	SPRING (LOADING L), TORSION	
77	3-354-960-01	SPRING (LOADING R), TORSION	
* 78	4-949-935-31	CUSHION (FL)	
* 79	4-955-792-11	HOLDER (5M), FL TUBE	
* 80	3-354-954-01	LEVER (LOCK LEVER R)	
81	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
82	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
83	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	
FL701	1-519-721-31	INDICATOR TUBE, FLUORESCENT	
IC302	8-759-604-95	IC M5F79M07L	
Q302	8-729-209-15	TRANSISTOR 2SD2012	

(3) TURNTABLE ASSEMBLY SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	4-926-388-01	BRACKET (ADJUSTMENT)		109	X-4924-457-1	ROLLER ASSY	
102	4-955-787-11	TABLE, DISK		110	4-926-399-01	BELT	
* 103	4-949-226-11	PLATE, LOCK		111	4-923-597-01	SCREW, STEP	
* 104	1-452-538-11	MAGNET		112	4-934-380-01	PULLEY (R)	
* 105	4-930-506-02	BRACKET (PRESS PULLEY)		* 113	1-638-729-11	TABLE MOTOR BOARD	
106	4-926-384-01	SCREW, STEP		114	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
* 107	4-926-383-01	TABLE (B), DISK		D701	8-719-970-19	DIODE GP-1A521	
108	4-926-395-01	SPRING, COMPRESSION		M701	A-4604-585-A	MOTOR ASSY, ROTARY	

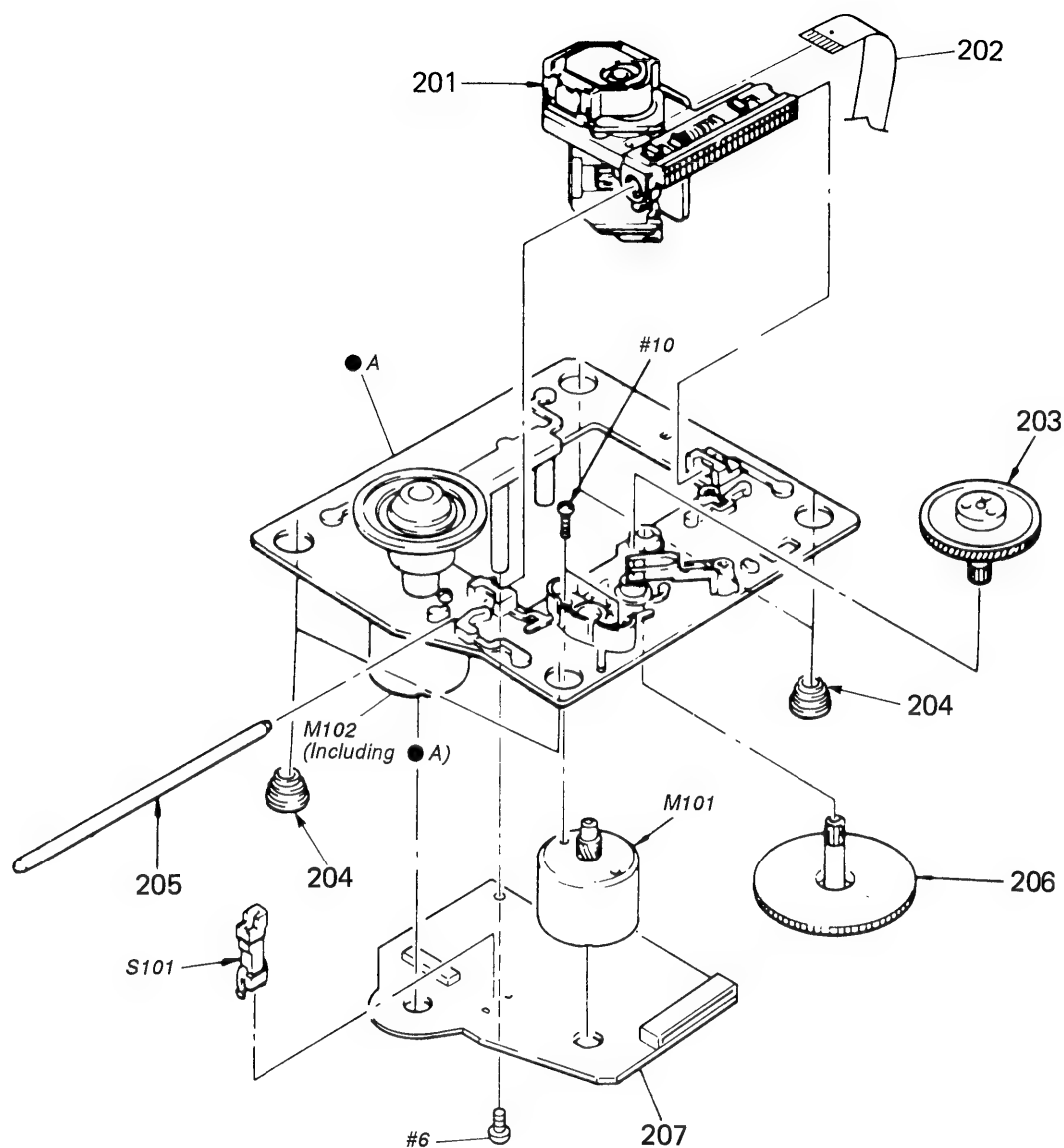
(4) CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
151	4-937-911-01	SPRING, TENSION	
* 152	4-934-373-01	BRACKET (BU)	
153	4-949-385-01	SPRING (D), COIL	
154	1-537-476-11	JUMPER, FILM (WITH TERMINAL)	
* 155	1-638-731-11	OPEN/UP SW BOARD	
156	4-944-490-01	BELT (TIMING)	
157	X-4941-529-1	PULLEY ASSY	
158	4-917-519-01	LEVER, SET	
159	4-924-412-01	SPRING (B), TENSION	
* 160	4-951-619-01	CUSHION (A)	
161	4-934-375-01	GEAR (LOADING B)	

Ref. No.	Part No.	Description	Remark
* 162	1-638-730-11	LOADING MOTOR BOARD	
163	4-934-381-01	GEAR (LOADING C)	
164	4-934-391-01	GEAR (LOADING A)	
* 165	4-943-996-01	SPRING, LEAF	
* 166	4-943-997-01	CHASSIS	
* 167	A-4356-887-A	MAIN BOARD, COMPLETE (EXCEPT D259:Canadian)	
* 167	A-4360-507-A	MAIN BOARD, COMPLETE (D259:Canadian)	
168	4-933-134-01	SCREW (+PTPWH M2. 6X6)	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR)	
M702	A-4604-834-A	MOTOR ASSY, LOADING	

(5) OPTICAL PICK-UP BLOCK ASSEMBLY (BU-5BD3)



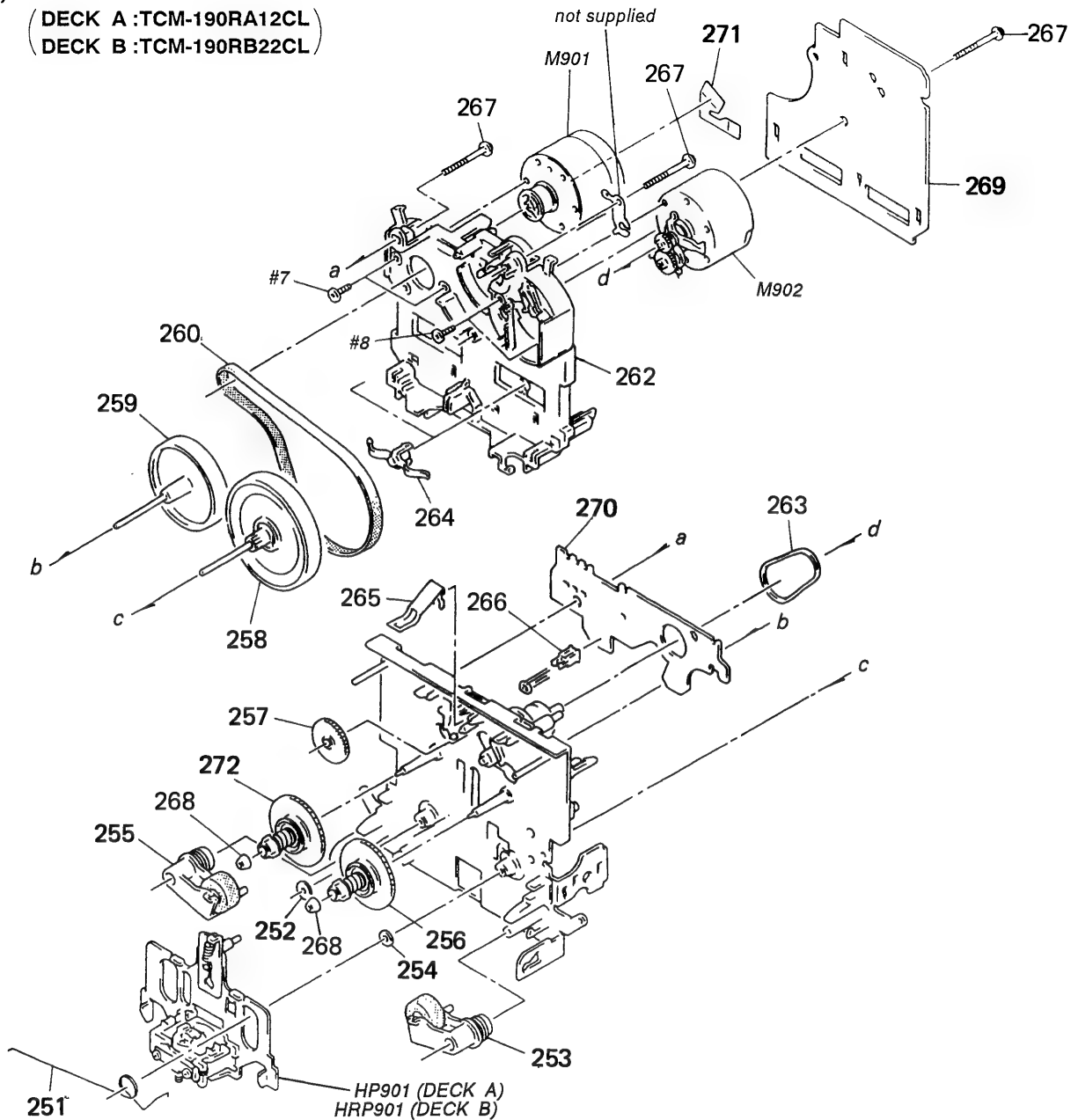
Ref. No.	Part No.	Description	Remark
△201	8-848-144-11	DEVICE, OPTICAL KSS-240A	
202	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
203	4-917-567-01	GEAR (M)	
204	4-933-126-01	INSULATOR (A)	
205	4-917-565-01	SHAFT, SLED	

Ref. No.	Part No.	Description	Remark
206	4-917-564-01	GEAR (P), FLATNESS	
* 207	A-4617-371-A	BD BOARD, COMPLETE	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

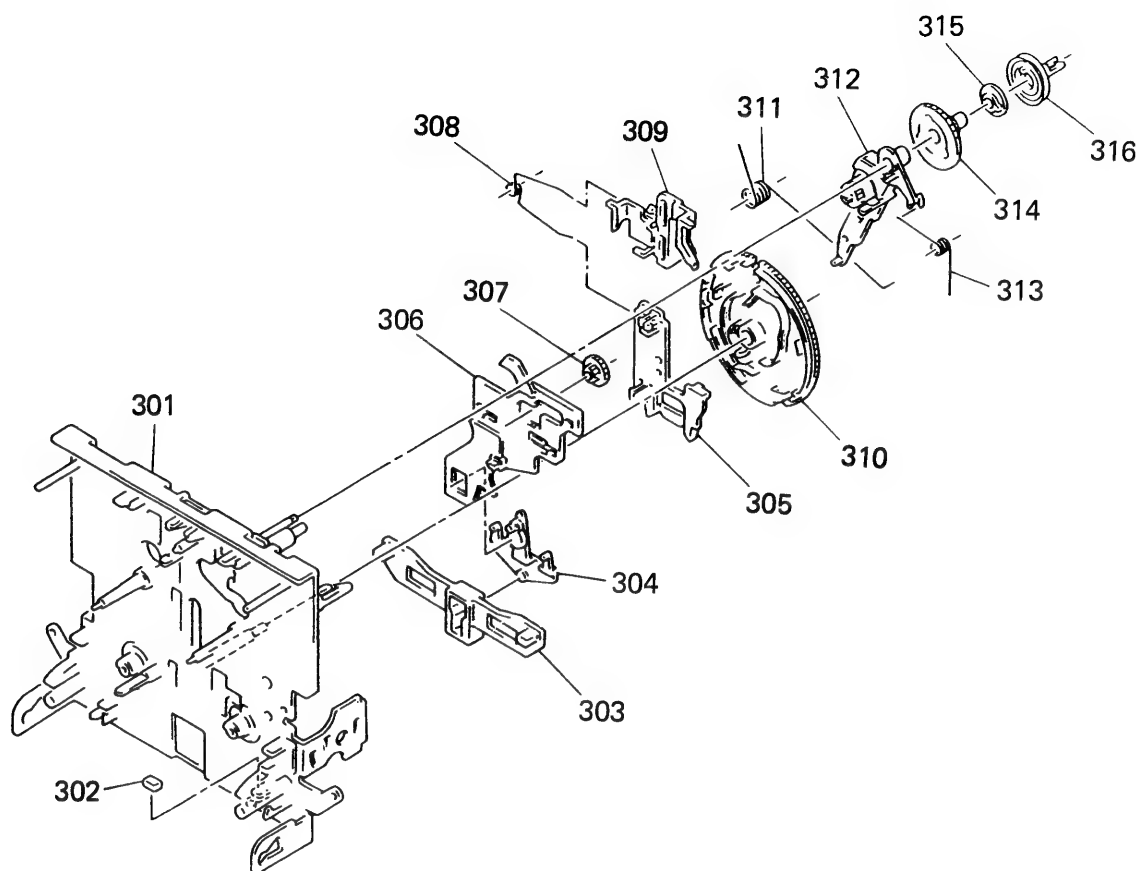
(6) MECHANISM SECTION-1
(DECK A :TCM-190RA12CL)
(DECK B :TCM-190RB22CL)



Ref. No.	Part No.	Description	Remark
251	3-359-455-01	SPRING, TORSION	
252	3-356-714-01	WASHER	
253	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
254	3-356-713-01	WASHER	
255	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
256	X-3359-404-1	TABLE ASSY, REEL	
257	3-359-424-01	GEAR (REV GEAR)	
258	X-3359-406-1	FLYWHEEL (FWD) ASSY	
259	X-3359-410-1	FLYWHEEL (REV) ASSY	
260	3-359-417-01	BELT (FLAT), CAPSTAN	
* 262	3-359-436-01	BASE (THRUST RETAINER), FITTING	
263	3-359-466-01	BELT (FR), SQUARE	
264	3-575-321-00	RETAINER, THRUST, CAPSTAN	

Ref. No.	Part No.	Description	Remark
265	3-359-430-01	SPRING (CASSETTE RETAINER), LEAF	
266	3-343-419-01	HOLDER (S SENSOR A)	
267	3-359-414-01	SCREW (+PTPH 2X23)	
268	3-362-308-01	CAP (REEL)	
* 269	A-2006-609-A	AUDIO BOARD, COMPLETE (DECK A)	
* 269	A-2006-610-A	AUDIO BOARD, COMPLETE (DECK B)	
* 270	1-634-841-14	SW-A BOARD	
271	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
272	X-3362-078-1	TABLE ASSY (B), REEL	
HP901	A-2003-838-A	DECK ASSY, HEAD (DECK A)	
HRPE901A	2004-190-A	DECK ASSY, HEAD (DECK B)	
M901	X-3359-417-1	MOTOR ASSY (CAPSTAN)	
M902	X-3363-501-1	MOTOR ASSY (REEL)	

(7) MECHANISM SECTION-2
 (DECK A :TCM-190RA12CL)
 (DECK B :TCM-190RB22CL)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	X-3359-415-1	CHASSIS ASSY, MECHANICAL		309	3-359-429-01	SLIDER (BRAKE PLATE)	
302	3-359-469-01	SPACER		310	3-359-420-01	GEAR (CAM GEAR)	
* 303	3-359-425-01	SLIDER (REVERSE SLIDER)		311	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
304	3-359-426-01	LEVER (REVERSE LEVER)		312	X-3359-405-1	LEVER (FR ARM) ASSY	
* 305	3-359-427-01	SLIDER (LEVERSE SLIDER)		313	3-359-453-01	SPRING (FR ARM), TORSION	
* 306	3-359-415-01	SLIDER (TRIGGER SLIDER)		314	3-359-419-01	GEAR (FR GEAR)	
307	3-359-448-01	GEAR (TRIGGER)		315	3-359-421-01	CLUTCH (REEL DISK)	
308	3-359-454-01	SPRING, TORSION		316	3-359-418-01	PULLEY (FR PULLEY)	

AUDIO-A

AUDIO-B

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

● SEMICONDUCTORS

In each case, u: μ , for example:uA...: μ A... uPA...: μ PA...uPB...: μ PB... uPC...: μ PC... uPD...: μ PD...

● CAPACITORS

uF: μ F

● COILS

uH: μ H

● Abbreviations

AUS: Australian Model

IT: Italian Model

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
----------	----------	-------------	--------

*	A-2006-609-A	AUDIO-A BOARD, COMPLETE	

< CAPACITOR >

C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C72	1-124-499-11	ELECT, NONPOLAR	1uF	20%	50V

< JACK >

* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P

< CONNECTOR >

* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P

< IC >

IC31	8-759-106-02	IC uPC4570G2
------	--------------	--------------

< JUMPER RESISTOR >

JW1	1-216-295-00	METAL CHIP	0	5%	1/10W
JW51	1-216-296-00	METAL CHIP	0	5%	1/8W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W

Ref. No.	Part No.	Description	Remark
----------	----------	-------------	--------

< TRANSISTOR >

Q71	8-729-602-36	TRANSISTOR 2SA1602
-----	--------------	--------------------

< RESISTOR >

R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W

< VARIABLE RESISTOR >

RV11	1-241-627-11	RES, ADJ, CARBON	1K
RV21	1-241-627-11	RES, ADJ, CARBON	1K
RV71	1-241-630-11	RES, ADJ, CARBON	10K
RV72	1-241-630-11	RES, ADJ, CARBON	10K

*	A-2006-610-A	AUDIO-B BOARD, COMPLETE
---	--------------	-------------------------

< CAPACITOR >

C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C14	1-136-273-91	FILM	75PF	5%	630V
C15	1-164-080-11	CERAMIC	390PF	10%	50V
C17	1-163-103-00	CERAMIC CHIP	27PF	5%	50V

AUDIO-B

Ref. No.	Part No.	Description	Remark
C18	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C21	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C22	1-136-157-00	FILM 0.022uF	5% 50V
C23	1-124-234-00	ELECT 22uF	20% 16V
C24	1-136-273-91	FILM 75PF	5% 630V
C25	1-164-080-11	CERAMIC 390PF	10% 50V
C27	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C28	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C31	1-124-234-00	ELECT 22uF	20% 16V
C32	1-124-234-00	ELECT 22uF	20% 16V
C33	1-124-234-00	ELECT 22uF	20% 16V
C51	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C52	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C53	1-163-022-00	CERAMIC CHIP 0.012uF	10% 50V
C54	1-136-559-11	FILM 0.0047uF	5% 630V
C56	1-164-505-11	CERAMIC CHIP 2.2uF	16V
C57	1-164-346-11	CERAMIC CHIP 1uF	16V
C58	1-163-024-00	CERAMIC CHIP 0.018uF	10% 50V
C72	1-124-499-11	ELECT, NONPOLAR 1uF	20% 50V
< JACK >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD	
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P	
< CONNECTOR >			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P	
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
< DIODE >			
D31	8-719-404-46	DIODE MA110	
< IC >			
IC31	8-759-106-02	IC uPC4570G2	
< JUMPER RESISTOR >			
JW1	1-216-296-00	METAL CHIP 0 5%	1/8W
JW2	1-216-295-00	METAL CHIP 0 5%	1/10W
JW3	1-216-295-00	METAL CHIP 0 5%	1/10W
JW4	1-216-295-00	METAL CHIP 0 5%	1/10W
JW6	1-216-295-00	METAL CHIP 0 5%	1/10W
JW7	1-216-295-00	METAL CHIP 0 5%	1/10W
JW52	1-216-296-00	METAL CHIP 0 5%	1/8W
JW53	1-216-296-00	METAL CHIP 0 5%	1/8W
JW54	1-216-296-00	METAL CHIP 0 5%	1/8W
JW55	1-216-296-00	METAL CHIP 0 5%	1/8W
JW56	1-216-296-00	METAL CHIP 0 5%	1/8W
JW57	1-216-296-00	METAL CHIP 0 5%	1/8W

Ref. No.	Part No.	Description	Remark
JW58	1-216-296-00	METAL CHIP 0 5%	1/8W
JW59	1-216-296-00	METAL CHIP 0 5%	1/8W
JW60	1-216-296-00	METAL CHIP 0 5%	1/8W
JW61	1-216-296-00	METAL CHIP 0 5%	1/8W
< COIL >			
L11	1-410-780-11	INDUCTOR 27mH	
L21	1-410-780-11	INDUCTOR 27mH	
< TRANSISTOR >			
Q51	8-729-808-01	TRANSISTOR 2SD1622-S	
Q52	8-729-808-01	TRANSISTOR 2SD1622-S	
Q53	8-729-808-01	TRANSISTOR 2SD1622-S	
Q71	8-729-602-36	TRANSISTOR 2SA1602	
< RESISTOR >			
R11	1-216-099-00	METAL CHIP 120K 5%	1/10W
R12	1-216-025-00	METAL CHIP 100 5%	1/10W
R13	1-216-100-00	METAL GLAZE 130K 5%	1/10W
R14	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R15	1-249-430-11	CARBON 12K 5%	1/4W
R21	1-216-099-00	METAL CHIP 120K 5%	1/10W
R22	1-216-025-00	METAL CHIP 100 5%	1/10W
R23	1-216-100-00	METAL GLAZE 130K 5%	1/10W
R24	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R25	1-249-430-11	CARBON 12K 5%	1/4W
R31	1-216-033-00	METAL CHIP 220 5%	1/10W
R32	1-216-033-00	METAL CHIP 220 5%	1/10W
R41	1-249-393-11	CARBON 10 5%	1/4W F
R42	1-249-393-11	CARBON 10 5%	1/4W F
R51	1-216-075-00	METAL CHIP 12K 5%	1/10W
R52	1-216-075-00	METAL CHIP 12K 5%	1/10W
R53	1-216-073-00	METAL CHIP 10K 5%	1/10W
R54	1-216-309-00	METAL CHIP 5.6 5%	1/10W
R55	1-216-309-00	METAL CHIP 5.6 5%	1/10W
R56	1-216-298-00	METAL CHIP 2.2 5%	1/10W
R71	1-216-082-00	METAL GLAZE 24K 5%	1/10W
R72	1-216-081-00	METAL CHIP 22K 5%	1/10W
R73	1-216-089-00	METAL CHIP 47K 5%	1/10W
R74	1-216-089-00	METAL CHIP 47K 5%	1/10W
< VARIABLE RESISTOR >			
RV11	1-241-627-11	RES, ADJ, CARBON 1K	
RV12	1-238-551-11	RES, ADJ, CARBON 220K	
RV21	1-241-627-11	RES, ADJ, CARBON 1K	
RV22	1-238-551-11	RES, ADJ, CARBON 220K	
RV71	1-241-630-11	RES, ADJ, CARBON 10K	
RV72	1-241-630-11	RES, ADJ, CARBON 10K	

AUDIO-B

BD

Ref. No.	Part No.	Description	Remark
< RELAY >			
RY31	1-515-913-11	RELAY	
< TRANSFORMER >			
T51	1-406-419-11	COIL, BIAS OSCILLATION	

*	A-4617-371-A	BD BOARD, COMPLETE	

< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C102	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C103	1-126-163-11	ELECT 4.7uF	20% 50V
C104	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C105	1-126-154-11	ELECT 47uF	20% 6.3V
C106	1-126-154-11	ELECT 47uF	20% 6.3V
C107	1-126-154-11	ELECT 47uF	20% 6.3V
C108	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C109	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C110	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C111	1-131-367-00	TANTALUM 22uF	10% 20V
C112	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C113	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C114	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C115	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C117	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C118	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C119	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C120	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C151	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C152	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C153	1-163-006-11	CERAMIC CHIP 560PF	10% 50V
C154	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C155	1-163-023-00	CERAMIC CHIP 0.015uF	5% 50V
C171	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C172	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C173	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C174	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P	
CN102	1-568-795-11	SOCKET, CONNECTOR 12P	
< IC >			
IC101	8-752-058-77	IC CXA1372AQ	
IC102	8-759-822-36	IC LA6532M	

Ref. No.	Part No.	Description	Remark
< JACK >			
J101	1-216-295-00	METAL CHIP 0 5%	1/10W
J102	1-216-295-00	METAL CHIP 0 5%	1/10W
< MOTOR >			
M101	X-4917-504-1	MOTOR ASSY (SLED)	
< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK	
< RESISTOR >			
R101	1-216-097-00	METAL CHIP 100K 5%	1/10W
R102	1-216-095-00	METAL CHIP 82K 5%	1/10W
R103	1-216-091-00	METAL CHIP 56K 5%	1/10W
R104	1-216-099-00	METAL CHIP 120K 5%	1/10W
R105	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R106	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R107	1-216-114-00	METAL GLAZE 510K 5%	1/10W
R108	1-216-105-00	METAL CHIP 220K 5%	1/10W
R109	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R110	1-216-049-00	METAL CHIP 1K 5%	1/10W
R111	1-216-049-00	METAL CHIP 1K 5%	1/10W
R112	1-216-083-00	METAL CHIP 27K 5%	1/10W
R113	1-216-071-00	METAL CHIP 8.2K 5%	1/10W
R114	1-216-105-00	METAL CHIP 220K 5%	1/10W
R152	1-216-073-00	METAL CHIP 10K 5%	1/10W
R153	1-216-085-00	METAL CHIP 33K 5%	1/10W
R154	1-216-085-00	METAL CHIP 33K 5%	1/10W
R155	1-216-093-00	METAL CHIP 68K 5%	1/10W
R156	1-216-081-00	METAL CHIP 22K 5%	1/10W
R157	1-216-079-00	METAL CHIP 18K 5%	1/10W
R158	1-216-079-00	METAL CHIP 18K 5%	1/10W
R159	1-216-079-00	METAL CHIP 18K 5%	1/10W
R160	1-216-049-00	METAL CHIP 1K 5%	1/10W
R171	1-216-001-00	METAL CHIP 10 5%	1/10W
R172	1-216-001-00	METAL CHIP 10 5%	1/10W
R173	1-216-001-00	METAL CHIP 10 5%	1/10W
R174	1-216-001-00	METAL CHIP 10 5%	1/10W
< VARIABLE RESISTOR >			
RV101	1-238-600-11	RES, ADJ, CARBON 10K	
RV101	1-241-630-11	RES, ADJ, CARBON 10K	
RV102	1-238-600-11	RES, ADJ, CARBON 10K	
RV102	1-241-630-11	RES, ADJ, CARBON 10K	
< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

LOADING MOTOR	MAIN
---------------	------

Ref. No.	Part No.	Description	Remark		
*	1-638-730-11	LOADING MOTOR BOARD	*****		
		< CAPACITOR >			
C705	1-161-375-00	CERAMIC	0.0022uF	20%	50V
		< CONNECTOR >			
CN705	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P			
		< MOTOR >			
M702	A-4604-834-A	MOTOR ASSY, LOADING	*****		
*	A-4356-887-A	MAIN BOARD, COMPLETE (EXCEPT D259:Canadian)	*****		
*	A-4360-507-A	MAIN BOARD, COMPLETE (D259:Canadian)	*****		
*	3-309-144-21	HEAT SINK			
*	4-880-403-11	HEAT SINK			
*	4-949-935-31	CUSHION (FL)			
*	4-955-792-11	HOLDER (5M), FL TUBE			
	7-682-548-04	SCREW +BVT 3X8 (S)			
		< CAPACITOR >			
C501	1-124-477-11	ELECT	47uF	20%	25V
C502	1-164-159-11	CERAMIC	0.1uF		50V
C503	1-164-159-11	CERAMIC	0.1uF		50V
C504	1-164-159-11	CERAMIC	0.1uF		50V
C511	1-136-161-00	FILM	0.047uF	5%	50V
C512	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C513	1-161-494-00	CERAMIC	0.022uF		25V
C514	1-162-306-11	CERAMIC	0.01uF	20%	16V
C515	1-124-902-00	ELECT	0.47uF	20%	50V
C516	1-161-494-00	CERAMIC	0.022uF		25V
C531	1-124-635-00	ELECT	220uF	20%	6.3V
C537	1-126-177-11	ELECT	100uF	20%	10V
C539	1-164-159-11	CERAMIC	0.1uF		50V
C542	1-124-635-00	ELECT	220uF	20%	6.3V
C543	1-164-159-11	CERAMIC	0.1uF		50V
C549	1-164-159-11	CERAMIC	0.1uF		50V
C550	1-124-635-00	ELECT	220uF	20%	6.3V
C551	1-164-159-11	CERAMIC	0.1uF		50V
C553	1-162-195-31	CERAMIC	4.7PF	10%	50V
C554	1-162-195-31	CERAMIC	4.7PF	10%	50V
C557	1-126-177-11	ELECT	100uF	20%	10V
C558	1-164-159-11	CERAMIC	0.1uF		50V
C601	1-124-472-11	ELECT	470uF	20%	10V
C602	1-164-159-11	CERAMIC	0.1uF		50V

Ref. No.	Part No.	Description	Remark		
C603	1-124-478-11	ELECT	100uF	20%	25V
C604	1-124-478-11	ELECT	100uF	20%	25V
C608	1-164-159-11	CERAMIC	0.1uF		50V
C609	1-164-159-11	CERAMIC	0.1uF		50V
C614	1-164-159-11	CERAMIC	0.1uF		50V
C622	1-161-494-00	CERAMIC	0.022uF		25V
C626	1-162-294-31	CERAMIC	0.001uF	10%	50V
C627	1-162-294-31	CERAMIC	0.001uF	10%	50V
C628	1-162-294-31	CERAMIC	0.001uF	10%	50V
C630	1-162-294-31	CERAMIC	0.001uF	10%	50V
C631	1-162-294-31	CERAMIC	0.001uF	10%	50V
C632	1-162-294-31	CERAMIC	0.001uF	10%	50V
C661	1-162-283-31	CERAMIC	120PF	10%	50V
C663	1-162-282-31	CERAMIC	100PF	10%	50V
C664	1-162-282-31	CERAMIC	100PF	10%	50V
C665	1-162-282-31	CERAMIC	100PF	10%	50V
C666	1-162-282-31	CERAMIC	100PF	10%	50V
C667	1-162-283-31	CERAMIC	120PF	10%	50V
C668	1-124-907-11	ELECT	10uF	20%	50V
C669	1-124-907-11	ELECT	10uF	20%	50V
C671	1-130-480-00	MYLAR	0.0056uF	5%	50V
C672	1-130-480-00	MYLAR	0.0056uF	5%	50V
C673	1-130-471-00	MYLAR	0.001uF	5%	50V
C674	1-130-471-00	MYLAR	0.001uF	5%	50V
C675	1-126-176-11	ELECT	220uF	20%	10V
C676	1-126-176-11	ELECT	220uF	20%	10V
C677	1-124-477-11	ELECT	47uF	20%	25V
C678	1-124-477-11	ELECT	47uF	20%	25V
C679	1-164-159-11	CERAMIC	0.1uF		50V
C680	1-164-159-11	CERAMIC	0.1uF		50V
C681	1-164-159-11	CERAMIC	0.1uF		50V
C688	1-161-494-00	CERAMIC	0.022uF		25V
C690	1-161-494-00	CERAMIC	0.022uF		25V
C800	1-124-563-11	ELECT	2200uF	20%	25V
C801	1-126-176-11	ELECT	220uF	20%	10V
C802	1-124-572-11	ELECT	100uF	20%	63V
C803	1-124-907-11	ELECT	10uF	20%	50V
C804	1-128-548-81	ELECT	4700uF	20%	25V
C805	1-128-548-81	ELECT	4700uF	20%	25V
C806	1-164-159-11	CERAMIC	0.1uF		50V
C807	1-124-907-11	ELECT	10uF	20%	50V
C808	1-124-472-11	ELECT	470uF	20%	10V
C809	1-124-472-11	ELECT	470uF	20%	10V
C811	1-124-443-00	ELECT	100uF	20%	10V
C813	1-164-159-11	CERAMIC	0.1uF		50V
C815	1-124-927-11	ELECT	4.7uF	20%	100V
C816	1-124-907-11	ELECT	10uF	20%	50V
C817	1-124-443-00	ELECT	100uF	20%	10V
C822	1-164-159-11	CERAMIC	0.1uF		50V

MAIN

Ref. No.	Part No.	Description	Remark
C823	1-164-159-11	CERAMIC	0.1uF 50V
C833	1-124-916-11	ELECT	22uF 20% 63V
C888	1-124-907-11	ELECT	10uF 20% 50V
C901	1-162-286-31	CERAMIC	220PF 10% 50V
C902	1-162-286-31	CERAMIC	220PF 10% 50V
C903	1-130-467-00	MYLAR	470PF 5% 50V
C904	1-130-467-00	MYLAR	470PF 5% 50V
C911	1-162-294-31	CERAMIC	0.001uF 10% 50V
C912	1-164-159-11	CERAMIC	0.1uF 50V

< CONNECTOR >

* CN601	1-691-902-21	CONNECTOR, FFC/FPC 37P
* CN603	1-568-824-11	SOCKET, CONNECTOR 5P
* CN604	1-568-943-11	PIN, CONNECTOR 5P
CN605	1-691-895-21	CONNECTOR, FFC/FPC 18P
* CN652	1-564-524-11	PLUG, CONNECTOR 9P
* CN653	1-564-523-11	PLUG, CONNECTOR 8P
* CN655	1-565-291-11	SOCKET, CONNECTOR 13P

< DIODE >

D601	8-719-987-63	DIODE 1N4148M
D802	8-719-933-50	DIODE HZS7C2L
D808	8-719-000-75	DIODE UZL-7L1
D810	8-719-010-12	DIODE UZ-2.7BS
D811	8-719-000-75	DIODE UZL-7L1

D841	8-719-500-36	DIODE D2SB20
------	--------------	--------------

< FERRITE BEAD >

FB601	1-412-473-21	INDUCTOR OUH
FB602	1-412-473-21	INDUCTOR OUH
FB603	1-412-473-21	INDUCTOR OUH
FB604	1-412-473-21	INDUCTOR OUH
FB605	1-412-473-21	INDUCTOR OUH
FB606	1-412-473-21	INDUCTOR OUH
FB607	1-412-473-21	INDUCTOR OUH
FB901	1-412-473-21	INDUCTOR OUH

< IC >

IC501	8-752-838-85	IC CXP50120-024Q
IC502	8-752-352-93	IC CXD2500BQ
IC503	8-759-821-32	IC CXA1291P
IC504	8-752-355-45	IC CXD2565M
IC505	8-759-634-51	IC M5218AP
IC506	8-759-634-51	IC M5218AP
IC507	8-759-000-49	IC MC14066BCP
IC801	8-759-071-48	IC TA7807S
IC802	8-759-633-42	IC M5293L
IC803	8-759-630-21	IC M5290P-16

Ref. No.	Part No.	Description	Remark
		< COIL >	

L501	1-408-417-00	INDUCTOR 47uH
------	--------------	---------------

< IC LINK >

△PS601	1-532-637-00	LINK, IC 1.0A (D259:AEP, UK, E, IT, AUS, D359)
△PS602	1-532-685-00	LINK, IC (D259:AEP, UK, E, IT, AUS, D359)

< TRANSISTOR >

Q541	8-729-900-61	TRANSISTOR DTA114ES
Q542	8-729-900-61	TRANSISTOR DTA114ES
Q543	8-729-900-61	TRANSISTOR DTA114ES
Q601	8-729-900-89	TRANSISTOR DTC144ES
Q673	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q674	8-729-141-30	TRANSISTOR 2SC3623A-LK
Q675	8-729-620-05	TRANSISTOR 2SC2603-EF
Q676	8-729-620-05	TRANSISTOR 2SC2603-EF
Q677	8-729-620-05	TRANSISTOR 2SC2603-EF
Q678	8-729-900-89	TRANSISTOR DTC144ES

Q679	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q802	8-729-140-96	TRANSISTOR 2SD774-34
Q803	8-729-141-83	TRANSISTOR 2SB1094-LK
Q809	8-729-119-76	TRANSISTOR 2SA1175-HFE

< RESISTOR >

R501	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R502	1-249-417-11	CARBON	1K	5%	1/4W	F
R503	1-249-417-11	CARBON	1K	5%	1/4W	F
R504	1-249-417-11	CARBON	1K	5%	1/4W	F
R511	1-249-423-11	CARBON	3.3K	5%	1/4W	F

R512	1-249-429-11	CARBON	10K	5%	1/4W	
R513	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R514	1-249-429-11	CARBON	10K	5%	1/4W	
R515	1-249-417-11	CARBON	1K	5%	1/4W	F
R516	1-249-417-11	CARBON	1K	5%	1/4W	F

R517	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R518	1-249-441-11	CARBON	100K	5%	1/4W	
R531	1-249-417-11	CARBON	1K	5%	1/4W	F
R539	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R541	1-249-405-11	CARBON	100	5%	1/4W	F

R543	1-249-441-11	CARBON	100K	5%	1/4W	
R544	1-249-441-11	CARBON	100K	5%	1/4W	
R547	1-249-441-11	CARBON	100K	5%	1/4W	
R601	1-249-433-11	CARBON	22K	5%	1/4W	
R602	1-249-433-11	CARBON	22K	5%	1/4W	

R603	1-249-433-11	CARBON	22K	5%	1/4W	
R604	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R605	1-249-425-11	CARBON	4.7K	5%	1/4W	F

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

OPEN/UP SW

PANEL-B

Ref. No.	Part No.	Description	Remark
R606	1-249-425-11	CARBON 4.7K 5%	1/4W F
R608	1-249-441-11	CARBON 100K 5%	1/4W
R609	1-249-440-11	CARBON 82K 5%	1/4W
R610	1-247-874-11	CARBON 62K 5%	1/4W
R611	1-249-435-11	CARBON 33K 5%	1/4W
R612	1-247-878-00	CARBON 91K 5%	1/4W
R613	1-247-864-11	CARBON 24K 5%	1/4W
R614	1-247-880-11	CARBON 110K 5%	1/4W
R615	1-249-440-11	CARBON 82K 5%	1/4W
R616	1-247-876-11	CARBON 75K 5%	1/4W
R621	1-249-393-11	CARBON 10 5%	1/4W F
R622	1-249-393-11	CARBON 10 5%	1/4W F
R625	1-249-429-11	CARBON 10K 5%	1/4W
R626	1-249-429-11	CARBON 10K 5%	1/4W
R627	1-249-429-11	CARBON 10K 5%	1/4W
R628	1-249-429-11	CARBON 10K 5%	1/4W
R629	1-249-429-11	CARBON 10K 5%	1/4W
R630	1-249-429-11	CARBON 10K 5%	1/4W
R631	1-249-429-11	CARBON 10K 5%	1/4W
R632	1-249-429-11	CARBON 10K 5%	1/4W
R645	1-249-425-11	CARBON 4.7K 5%	1/4W F
R646	1-249-425-11	CARBON 4.7K 5%	1/4W F
R652	1-249-433-11	CARBON 22K 5%	1/4W
R653	1-249-433-11	CARBON 22K 5%	1/4W
R655	1-249-433-11	CARBON 22K 5%	1/4W
R656	1-249-433-11	CARBON 22K 5%	1/4W
R661	1-247-862-11	CARBON 20K 5%	1/4W
R662	1-247-862-11	CARBON 20K 5%	1/4W
R663	1-247-862-11	CARBON 20K 5%	1/4W
R664	1-247-862-11	CARBON 20K 5%	1/4W
R665	1-249-433-11	CARBON 22K 5%	1/4W
R666	1-249-433-11	CARBON 22K 5%	1/4W
R667	1-249-433-11	CARBON 22K 5%	1/4W
R668	1-249-433-11	CARBON 22K 5%	1/4W
R669	1-249-419-11	CARBON 1.5K 5%	1/4W F
R670	1-249-419-11	CARBON 1.5K 5%	1/4W F
R671	1-249-419-11	CARBON 1.5K 5%	1/4W F
R672	1-249-419-11	CARBON 1.5K 5%	1/4W F
R675	1-249-421-11	CARBON 2.2K 5%	1/4W F
R676	1-249-421-11	CARBON 2.2K 5%	1/4W F
R677	1-249-441-11	CARBON 100K 5%	1/4W
R678	1-249-441-11	CARBON 100K 5%	1/4W
R681	1-249-425-11	CARBON 4.7K 5%	1/4W F
R682	1-249-425-11	CARBON 4.7K 5%	1/4W F
R683	1-249-409-11	CARBON 220 5%	1/4W F
R684	1-249-409-11	CARBON 220 5%	1/4W F
R690	1-249-429-11	CARBON 10K 5%	1/4W
R691	1-249-417-11	CARBON 1K 5%	1/4W F
R692	1-249-429-11	CARBON 10K 5%	1/4W

Ref. No.	Part No.	Description	Remark
R693	1-249-433-11	CARBON 22K 5%	1/4W
R694	1-249-393-11	CARBON 10 5%	1/4W F
R695	1-249-433-11	CARBON 22K 5%	1/4W
R696	1-249-433-11	CARBON 22K 5%	1/4W
R697	1-249-433-11	CARBON 22K 5%	1/4W
R801	1-249-435-11	CARBON 33K 5%	1/4W
R813	1-249-423-11	CARBON 3.3K 5%	1/4W F
R814	1-249-425-11	CARBON 4.7K 5%	1/4W F
R815	1-249-425-11	CARBON 4.7K 5%	1/4W F
R819	1-249-410-11	CARBON 270 5%	1/4W F
R820	1-249-438-11	CARBON 56K 5%	1/4W
R821	1-249-429-11	CARBON 10K 5%	1/4W
R826	1-249-417-11	CARBON 1K 5%	1/4W F
R827	1-249-410-11	CARBON 270 5%	1/4W F
R852	1-249-429-11	CARBON 10K 5%	1/4W
< VIBRATOR >			
X501	1-579-833-21	VIBRATOR, CRYSTAL 33MHz	

*	1-638-731-11	OPEN/UP SW BOARD	

< SWITCH >			
S702	1-571-300-21	SWITCH, ROTARY (UP/OPEN)	

*	1-646-432-21	PANEL-B BOARD	

< CONNECTOR >			
* CN750	1-691-902-21	CONNECTOR, FFC/FPC 37P	
< FILTER >			
FL701	1-519-721-31	INDICATOR TUBE, FLUORESCENT	
< RESISTOR >			
R751	1-249-422-11	CARBON 2.7K 5%	1/4W F
R752	1-249-422-11	CARBON 2.7K 5%	1/4W F
R753	1-249-424-11	CARBON 3.9K 5%	1/4W F
R754	1-249-427-11	CARBON 6.8K 5%	1/4W F
R763	1-249-422-11	CARBON 2.7K 5%	1/4W F
R764	1-249-424-11	CARBON 3.9K 5%	1/4W F
R765	1-249-427-11	CARBON 6.8K 5%	1/4W F
< SWITCH >			
S750	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S751	1-554-303-21	SWITCH, TACTILE (CHECK)	
S752	1-554-303-21	SWITCH, TACTILE (CLEAR)	

PANEL-B

PANEL-U

SW

TC PANEL (A)

TC PANEL (B)

Ref. No.	Part No.	Description	Remark
S753	1-554-303-21	SWITCH, TACTILE (FADER)	
S754	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S755	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S765	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S766	1-554-303-21	SWITCH, TACTILE (SHUTTLE)	
S767	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S780	1-554-303-21	SWITCH, TACTILE (TIME)	

*	1-646-431-21	PANEL-U BOARD	

		< CONNECTOR >	
CN752	1-506-469-11	PIN, CONNECTOR 4P	
		< RESISTOR >	
R755	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R756	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R757	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R758	1-249-432-11	CARBON 18K 5% 1/4W F	
R759	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R760	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R761	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R762	1-249-432-11	CARBON 18K 5% 1/4W F	
R766	1-249-422-11	CARBON 2.7K 5% 1/4W F	
R767	1-249-424-11	CARBON 3.9K 5% 1/4W F	
R768	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R769	1-249-432-11	CARBON 18K 5% 1/4W F	
		< SWITCH >	
S756	1-554-303-21	SWITCH, TACTILE (K<)	
S757	1-554-303-21	SWITCH, TACTILE (P>)	
S758	1-554-303-21	SWITCH, TACTILE (4<)	
S759	1-554-303-21	SWITCH, TACTILE (P>)	
S760	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)	
S761	1-554-303-21	SWITCH, TACTILE (P>)	
S762	1-554-303-21	SWITCH, TACTILE (II)	
S763	1-554-303-21	SWITCH, TACTILE (■)	
S764	1-554-303-21	SWITCH, TACTILE (DISK SKIP)	
S768	1-554-303-21	SWITCH, TACTILE (DISK 5)	
S769	1-554-303-21	SWITCH, TACTILE (DISK 4)	
S770	1-554-303-21	SWITCH, TACTILE (DISK 3)	
S771	1-554-303-21	SWITCH, TACTILE (DISK 2)	
S772	1-554-303-21	SWITCH, TACTILE (DISK 1)	

Ref. No.	Part No.	Description	Remark
*	A-4357-003-A	SW BOARD, COMPLETE (D259)	

*	A-4357-196-A	SW BOARD, COMPLETE (D359)	

	1-646-887-21	TC PANEL (A) BOARD	

		< DIODE >	
D481	8-719-301-42	DIODE SEL2410E	
D482	8-719-301-49	LED SEL2810A	
D483	8-719-301-49	LED SEL2810A	
		< SWITCH >	
S401	1-554-303-21	SWITCH, TACTILE (■)	
S402	1-554-303-21	SWITCH, TACTILE (PLAY:▷)	
S403	1-554-303-21	SWITCH, TACTILE (PLAY:◁)	
S404	1-554-303-21	SWITCH, TACTILE (AMS:▶▶)	
S405	1-554-303-21	SWITCH, TACTILE (AMS:◀◀)	
S406	1-572-269-11	SWITCH, SLIDE (DOLBY NR)	
S407	1-572-268-11	SWITCH, SLIDE (DIRECTION MODE)	
	1-646-888-21	TC PANEL (B) BOARD	

		< CONNECTOR >	
CN451	1-568-442-11	SOCKET, CONNECTOR 9P	
CN452	1-568-443-11	SOCKET, CONNECTOR 13P	
		< DIODE >	
D491	8-719-301-37	LED SEL2210S-CD	
D492	8-719-301-49	LED SEL2810A	
D493	8-719-301-42	DIODE SEL2410E	
D494	8-719-301-49	LED SEL2810A	
D495	8-719-301-49	LED SEL2810A	
D496	8-719-301-37	LED SEL2210S-CD (D359)	
D497	8-719-301-37	LED SEL2210S-CD	
D498	8-719-301-37	LED SEL2210S-CD	
		< RESISTOR >	
R481	1-249-407-11	CARBON 150 5% 1/4W F	
R482	1-249-409-11	CARBON 220 5% 1/4W F	
R483	1-249-415-11	CARBON 680 5% 1/4W F	
R484	1-249-417-11	CARBON 1K 5% 1/4W F	
R485	1-249-426-11	CARBON 5.6K 5% 1/4W F	
R486	1-249-430-11	CARBON 12K 5% 1/4W F	
R490	1-249-407-11	CARBON 150 5% 1/4W F	
R491	1-249-409-11	CARBON 220 5% 1/4W F	
R492	1-249-411-11	CARBON 330 5% 1/4W F	
R493	1-249-413-11	CARBON 470 5% 1/4W F	

TC PANEL (B)

LEAF SW-A (DECK A)

LEAF SW-B (DECK B)

TABLE MOTOR

TC MAIN

Ref.No.	Part No.	Description	Remark		
R494	1-249-411-11	CARBON	330	5%	1/4W
R495	1-249-413-11	CARBON	470	5%	1/4W F
R496	1-249-415-11	CARBON	680	5%	1/4W F
R497	1-249-417-11	CARBON	1K	5%	1/4W F
R498	1-249-420-11	CARBON	1.8K	5%	1/4W F
R499	1-249-424-11	CARBON	3.9K	5%	1/4W F
< SWITCH >					
S451	1-554-303-21	SWITCH, TACTILE (■)			
S452	1-554-303-21	SWITCH, TACTILE (■ PAUSE)			
S453	1-554-303-21	SWITCH, TACTILE (PLAY:<)			
S454	1-554-303-21	SWITCH, TACTILE (PLAY:>)			
S455	1-554-303-21	SWITCH, TACTILE (● REC MUTE)			
S456	1-554-303-21	SWITCH, TACTILE (AMS:▶▶)			
S457	1-554-303-21	SWITCH, TACTILE (AMS:◀◀)			
S458	1-554-303-21	SWITCH, TACTILE (●:REC)			
S459	1-554-303-21	SWITCH, TACTILE (DUBBING SPEED:HIGH)			
S460	1-554-303-21	SWITCH, TACTILE (DUBBING SPEED:NORMAL)			
S461	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO) (D359)			

*	1-634-841-14	LEAF SW-A BOARD (DECK A)			

	3-343-419-01	HOLDER (S SENSOR A)			
< CONNECTOR >					
* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P			
< IC >					
IC81	8-719-710-03	DIODE NJL5165K-B			
< RESISTOR >					
R84	1-249-417-11	CARBON	1K	5%	1/4W F
R85	1-249-408-11	CARBON	180	5%	1/4W F
< SWITCH >					
S81	1-571-958-11	SWITCH, PUSH (1 KEY)			
S82	1-571-281-21	SWITCH, LEAF			
S86	1-571-281-21	SWITCH, LEAF			

*	1-634-841-14	LEAF SW-B BOARD (DECK B)			

	3-343-419-01	HOLDER (S SENSOR A)			
< CONNECTOR >					
* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P			

Ref.No.	Part No.	Description	Remark		
< IC >					
IC81	8-719-710-03	DIODE NJL5165K-B			
< RESISTOR >					
R81	1-249-414-11	CARBON	560	5%	1/4W F
R82	1-247-818-11	CARBON	300	5%	1/4W
R83	1-247-834-11	CARBON	1.3K	5%	1/4W
R84	1-249-417-11	CARBON	1K	5%	1/4W F
R85	1-249-408-11	CARBON	180	5%	1/4W F
< SWITCH >					
S81	1-571-958-11	SWITCH, PUSH (1 KEY)			
S82	1-571-281-21	SWITCH, LEAF			
S84	1-571-281-21	SWITCH, LEAF			
S85	1-571-281-21	SWITCH, LEAF			
S86	1-571-281-21	SWITCH, LEAF			

*	1-638-729-11	TABLE MOTOR BOARD			

< CAPACITOR >					
C704	1-161-375-00	CERAMIC	0.0022uF	20%	50V
< CONNECTOR >					
* CN707	1-573-044-11	SOCKET, CONNECTOR 5P			
< DIODE >					
D701	8-719-970-19	DIODE GP-1A521			
< MOTOR >					
M701	A-4604-585-A	MOTOR ASSY, ROTARY			
< RESISTOR >					
R701	1-249-416-11	CARBON	820	5%	1/4W F

*	A-4356-892-A	TC MAIN BOARD, COMPLETE			

*	4-870-539-00	PLATE, GROUND			
	8-729-900-65	TRANSISTOR DTA144ES			
	8-729-900-61	TRANSISTOR DTA114ES			
< CAPACITOR >					
C122	1-130-479-00	MYLAR	0.0047uF	5%	50V
C123	1-162-291-31	CERAMIC	560PF	10%	50V
C126	1-136-165-00	FILM	0.1uF	5%	50V
C127	1-126-791-11	ELECT	10uF	20%	35V

TC MAIN

Ref. No.	Part No.	Description		Remark
C128	1-126-301-11	ELECT	1uF	20% 50V
C129	1-124-465-00	ELECT	0.47uF	20% 50V
C130	1-126-791-11	ELECT	10uF	20% 35V
C131	1-164-159-11	CERAMIC	0.1uF	50V
C132	1-126-791-11	ELECT	10uF	20% 35V
C141	1-126-301-11	ELECT	1uF	20% 50V
C142	1-126-791-11	ELECT	10uF	20% 35V
C143	1-161-375-00	CERAMIC	0.0022uF	20% 50V
C222	1-130-479-00	MYLAR	0.0047uF	5% 50V
C223	1-162-291-31	CERAMIC	560PF	10% 50V
C226	1-136-165-00	FILM	0.1uF	5% 50V
C227	1-126-791-11	ELECT	10uF	20% 35V
C228	1-126-301-11	ELECT	1uF	20% 50V
C229	1-124-465-00	ELECT	0.47uF	20% 50V
C230	1-126-791-11	ELECT	10uF	20% 35V
C231	1-161-377-00	CERAMIC	0.0047uF	20% 16V
C232	1-161-375-00	CERAMIC	0.0022uF	20% 50V
C233	1-124-465-00	ELECT	0.47uF	20% 50V
C241	1-126-301-11	ELECT	1uF	20% 50V
C242	1-126-791-11	ELECT	10uF	20% 35V
C243	1-161-375-00	CERAMIC	0.0022uF	20% 50V
C301	1-126-791-11	ELECT	10uF	20% 35V
C302	1-126-926-11	ELECT	1000uF	20% 10V
C303	1-123-382-00	ELECT	3.3uF	20% 100V
C304	1-164-159-11	CERAMIC	0.1uF	50V
C305	1-164-159-11	CERAMIC	0.1uF	50V
C306	1-126-933-11	ELECT	100uF	20% 16V
C307	1-126-933-11	ELECT	100uF	20% 16V
C308	1-126-926-11	ELECT	1000uF	20% 10V
C309	1-126-926-11	ELECT	1000uF	20% 10V
C310	1-126-791-11	ELECT	10uF	20% 35V
C311	1-126-791-11	ELECT	10uF	20% 35V
C312	1-126-949-11	ELECT	220uF	20% 35V
C314	1-124-584-00	ELECT	100uF	20% 10V
C315	1-126-926-11	ELECT	1000uF	20% 10V
C316	1-126-933-11	ELECT	100uF	20% 16V
C317	1-126-933-11	ELECT	100uF	20% 16V
C318	1-126-933-11	ELECT	100uF	20% 16V
C456	1-162-290-31	CERAMIC	470PF	10% 50V
C457	1-162-290-31	CERAMIC	470PF	10% 50V
C458	1-164-159-11	CERAMIC	0.1uF	50V
C459	1-164-159-11	CERAMIC	0.1uF	50V

< CONNECTOR >

* CN101	1-564-523-11	PLUG, CONNECTOR 8P
* CN301	1-564-519-11	PLUG, CONNECTOR 4P
* CN302	1-564-506-11	PLUG, CONNECTOR 3P
* CN303	1-564-506-11	PLUG, CONNECTOR 3P
* CN401	1-564-517-11	PLUG, CONNECTOR 2P

Ref. No.	Part No.	Description	Remark
CN402	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN403	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN404	1-580-783-11	CONNECTOR, BOARD TO BOARD	
CN405	1-568-437-11	SOCKET, CONNECTOR 7P	
CN406	1-568-437-11	SOCKET, CONNECTOR 7P	

CN407	1-568-441-11	SOCKET, CONNECTOR 9P
CN408	1-568-444-11	SOCKET, CONNECTOR 13P

< DIODE >

D301	8-719-000-78	DIODE UZL-7L2
D302	8-719-987-63	DIODE 1N4148M
D303	8-719-987-63	DIODE 1N4148M
D304	8-719-987-63	DIODE 1N4148M
D305	8-719-200-82	DIODE 11ES2

D306	8-719-200-82	DIODE 11ES2
D401	8-719-987-63	DIODE 1N4148M
D402	8-719-987-63	DIODE 1N4148M
D403	8-719-987-63	DIODE 1N4148M

< IC >

IC101	8-759-098-75	IC HA12171NT
IC301	8-759-071-48	IC TA7807S
IC401	8-759-076-36	IC M50964-256FP
IC402	8-759-635-63	IC M51943BSL
IC403	8-759-207-05	IC TA7272P

< TRANSISTOR >

Q101	8-729-620-05	TRANSISTOR 2SC2603-EF
Q201	8-729-620-05	TRANSISTOR 2SC2603-EF
Q301	8-729-620-05	TRANSISTOR 2SC2603-EF
Q400	8-729-900-61	TRANSISTOR DTA114ES
Q401	8-729-900-61	TRANSISTOR DTA114ES

Q402	8-729-900-61	TRANSISTOR DTA114ES
Q403	8-729-900-61	TRANSISTOR DTA114ES
Q404	8-729-900-61	TRANSISTOR DTA114ES
Q405	8-729-900-61	TRANSISTOR DTA114ES
Q406	8-729-900-89	TRANSISTOR DTC144ES

Q407	8-729-900-89	TRANSISTOR DTC144ES
Q408	8-729-900-61	TRANSISTOR DTA114ES
Q409	8-729-620-05	TRANSISTOR 2SC2603-EF
Q410	8-729-620-05	TRANSISTOR 2SC2603-EF
Q411	8-729-801-84	TRANSISTOR 2SB1013-4

Q412	8-729-801-84	TRANSISTOR 2SB1013-4
Q413	8-729-900-61	TRANSISTOR DTA114ES
Q414	8-729-900-89	TRANSISTOR DTC144ES

< RESISTOR >

R120	1-215-451-00	METAL	18K	1%	1/6W
R121	1-249-430-11	CARBON	12K	5%	1/4W

TC MAIN

Ref. No.	Part No.	Description	Remark		
R122	1-249-431-11	CARBON	15K	5%	1/4W
R123	1-249-425-11	CARBON	4.7K	5%	1/4W F
R124	1-249-428-11	CARBON	8.2K	5%	1/4W F
R125	1-249-429-11	CARBON	10K	5%	1/4W
R127	1-249-429-11	CARBON	10K	5%	1/4W
R130	1-249-429-11	CARBON	10K	5%	1/4W
R131	1-249-425-11	CARBON	4.7K	5%	1/4W F
R132	1-249-429-11	CARBON	10K	5%	1/4W
R133	1-249-429-11	CARBON	10K	5%	1/4W
R135	1-247-864-11	CARBON	24K	5%	1/4W
R136	1-249-429-11	CARBON	10K	5%	1/4W
R137	1-249-429-11	CARBON	10K	5%	1/4W
R138	1-249-429-11	CARBON	10K	5%	1/4W
R141	1-249-421-11	CARBON	2.2K	5%	1/4W F
R142	1-249-428-11	CARBON	8.2K	5%	1/4W F
R143	1-247-840-00	CARBON	2.4K	5%	1/4W
R144	1-249-433-11	CARBON	22K	5%	1/4W
R145	1-249-417-11	CARBON	1K	5%	1/4W F
R221	1-249-430-11	CARBON	12K	5%	1/4W
R222	1-249-431-11	CARBON	15K	5%	1/4W
R223	1-249-425-11	CARBON	4.7K	5%	1/4W F
R224	1-249-428-11	CARBON	8.2K	5%	1/4W F
R225	1-247-882-11	CARBON	130K	5%	1/4W
R226	1-247-866-11	CARBON	30K	5%	1/4W
R229	1-249-429-11	CARBON	10K	5%	1/4W
R230	1-249-432-11	CARBON	18K	5%	1/4W
R231	1-247-885-00	CARBON	180K	5%	1/4W
R241	1-249-421-11	CARBON	2.2K	5%	1/4W F
R242	1-249-428-11	CARBON	8.2K	5%	1/4W F
R243	1-247-840-00	CARBON	2.4K	5%	1/4W
R244	1-249-433-11	CARBON	22K	5%	1/4W
R245	1-249-417-11	CARBON	1K	5%	1/4W F
R300	1-249-405-11	CARBON	100	5%	1/4W F
R301	1-249-421-11	CARBON	2.2K	5%	1/4W F
R302	1-249-405-11	CARBON	100	5%	1/4W F
R303	1-249-422-11	CARBON	2.7K	5%	1/4W F
R352	1-249-393-11	CARBON	10	5%	1/4W F
R400	1-249-389-11	CARBON	4.7	5%	1/4W F
R401	1-249-429-11	CARBON	10K	5%	1/4W
R402	1-247-903-00	CARBON	1M	5%	1/4W
R403	1-247-895-00	CARBON	470K	5%	1/4W
R404	1-247-895-00	CARBON	470K	5%	1/4W
R405	1-249-408-11	CARBON	180	5%	1/4W F
R406	1-249-408-11	CARBON	180	5%	1/4W F
R407	1-249-410-11	CARBON	270	5%	1/4W F
R408	1-247-812-11	CARBON	160	5%	1/4W
R409	1-247-812-11	CARBON	160	5%	1/4W
R410	1-247-816-11	CARBON	240	5%	1/4W
R411	1-247-812-11	CARBON	160	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R412	1-249-411-11	CARBON	330	5%	1/4W
R413	1-249-429-11	CARBON	10K	5%	1/4W
R414	1-249-429-11	CARBON	10K	5%	1/4W
R415	1-249-421-11	CARBON	2.2K	5%	1/4W F
R416	1-249-421-11	CARBON	2.2K	5%	1/4W F
R417	1-249-437-11	CARBON	47K	5%	1/4W
R418	1-249-429-11	CARBON	10K	5%	1/4W
R420	1-249-425-11	CARBON	4.7K	5%	1/4W F
R422	1-249-425-11	CARBON	4.7K	5%	1/4W F
R423	1-249-429-11	CARBON	10K	5%	1/4W
R425	1-249-417-11	CARBON	1K	5%	1/4W F
R426	1-249-417-11	CARBON	1K	5%	1/4W F
R427	1-249-417-11	CARBON	1K	5%	1/4W F
R431	1-249-429-11	CARBON	10K	5%	1/4W
R432	1-249-415-11	CARBON	680	5%	1/4W F
R433	1-249-429-11	CARBON	10K	5%	1/4W
R434	1-249-415-11	CARBON	680	5%	1/4W F
R435	1-249-429-11	CARBON	10K	5%	1/4W
R451	1-249-425-11	CARBON	4.7K	5%	1/4W F
R452	1-249-435-11	CARBON	33K	5%	1/4W
R453	1-249-437-11	CARBON	47K	5%	1/4W
R454	1-247-872-11	CARBON	51K	5%	1/4W
R455	1-247-862-11	CARBON	20K	5%	1/4W
R456	1-247-866-11	CARBON	30K	5%	1/4W
R457	1-247-872-11	CARBON	51K	5%	1/4W
R458	1-249-405-11	CARBON	100	5%	1/4W F
R459	1-249-381-11	CARBON	1	5%	1/4W F
R460	1-249-381-11	CARBON	1	5%	1/4W F
R461	1-249-425-11	CARBON	4.7K	5%	1/4W F
R462	1-249-435-11	CARBON	33K	5%	1/4W
R463	1-249-437-11	CARBON	47K	5%	1/4W
R464	1-247-872-11	CARBON	51K	5%	1/4W
R465	1-247-862-11	CARBON	20K	5%	1/4W
R466	1-247-866-11	CARBON	30K	5%	1/4W
R467	1-247-872-11	CARBON	51K	5%	1/4W
R468	1-249-405-11	CARBON	100	5%	1/4W F
R469	1-249-381-11	CARBON	1	5%	1/4W F
R470	1-249-381-11	CARBON	1	5%	1/4W F
R471	1-249-429-11	CARBON	10K	5%	1/4W
R472	1-249-425-11	CARBON	4.7K	5%	1/4W F
R473	1-249-434-11	CARBON	27K	5%	1/4W
R474	1-249-429-11	CARBON	10K	5%	1/4W
R476	1-249-425-11	CARBON	4.7K	5%	1/4W F
R477	1-249-434-11	CARBON	27K	5%	1/4W
< VARIABLE RESISTOR >					
RV101	1-230-496-11	RES, ADJ, CARBON 10K			
RV201	1-230-496-11	RES, ADJ, CARBON 10K			

TC MAIN

TRANSFORMER

Ref. No.	Part No.	Description	Remark
< VIBRATOR >			
X401	1-577-358-21	VIBRATOR, CERAMIC	

*	1-646-433-21	TRANSFORMER BOARD	

< CONNECTOR >			
* CN701	1-564-512-11	PLUG, CONNECTOR 9P	
* CN702	1-564-507-11	PLUG, CONNECTOR 4P	
< DIODE >			
D801	8-719-200-82	DIODE 11ES2	
D803	8-719-200-82	DIODE 11ES2	
D804	8-719-200-82	DIODE 11ES2	
< TRANSFORMER >			
<u>A</u> T801	1-423-421-11	TRANSFORMER, POWER	

MISCELLANEOUS			

55	1-751-209-11	WIRE, FLAT TYPE (9 CORE) (D259)	
64	1-590-574-11	WIRE, FLAT TYPE (7 CORE)	
65	1-590-485-11	WIRE, FLAT TYPE (7 CORE)	
69	1-751-055-31	WIRE, FLAT TYPE (37 CORE) (D259)	
70	1-690-589-31	WIRE, FLAT TYPE (13 CORE) (D359)	
70	1-751-210-11	WIRE, FLAT TYPE (13 CORE) (D259)	
* 104	1-452-538-11	MAGNET	
114	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
154	1-537-476-11	JUMPER, FILM (WITH TERMINAL)	
<u>A</u> 201	8-848-144-11	DEVICE, OPTICAL KSS-240A	
202	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
271	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
D701	8-719-970-19	DIODE GP-1A521	
HP901	A-2003-838-A	DECK ASSY, HEAD (DECK A)	
HRPE901A	2004-190-A	DECK ASSY, HEAD (DECK B)	
IC302	8-759-604-95	IC M5F79M07	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M901	X-3359-417-1	MOTOR ASSY (CAPSTAN)	
M902	X-3363-501-1	MOTOR ASSY (REEL)	
Q302	8-729-209-15	TRANSISTOR 2SD2012	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR)	

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			

* 5	4-941-548-01	LABEL, CLASS 1 (D259:AEP, UK, E, IT, AUS, D359)	
7	4-937-945-01	PLATE (TRANSPORT), LOCK	
* 8	3-703-713-41	STICKER, SONY SYMBOL (10) (D359)	

HARDWARE LIST			

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#3	7-682-554-04	SCREW +B 3X25	
#4	7-682-661-09	SCREW +PSW 4X8	
#5	7-685-136-19	SCREW +P 2.6X12 TYPE2 NON-SLIT	
#6	7-621-255-15	SCREW +P 2X3	
#7	7-621-775-00	SCREW +B 2.6X3	
#8	7-627-556-08	SCREW +P 2.6X2.8	
#9	7-682-548-04	SCREW +BVTT 3X8 (S)	
#11	7-685-648-79	SCREW (M3X12), TAPPING	

The components identified by mark <u>A</u> or dotted line with mark. <u>A</u> are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque <u>A</u> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
---	---

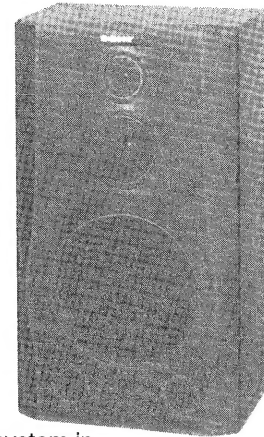
SS-D170

SERVICE MANUAL

SPECIFICATIONS

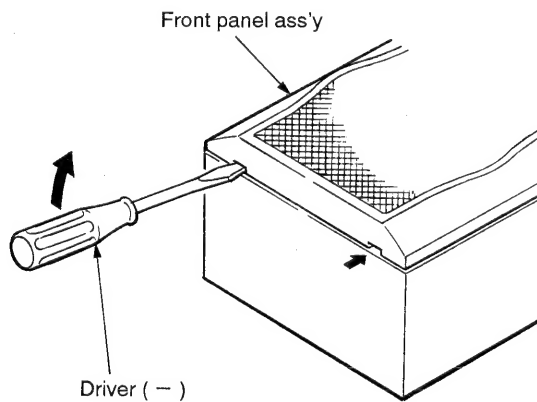
Speaker system	3 way
Mass	Approx. 4.3 kg per speaker
Dimension	Approx. 260 × 450 × 180 mm (w/h/d, including projections)

*US Model
Canadian Model
E Model
Australian Model
PX Model*



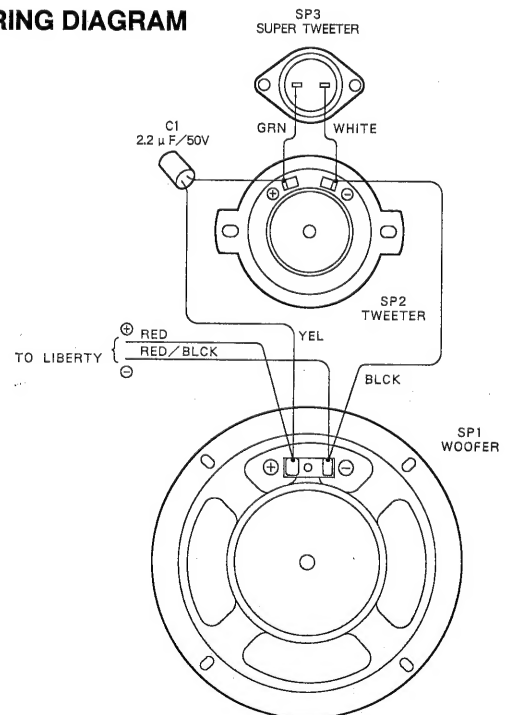
1. DISASSEMBLY

FRONT PANEL ASSEMBLY



This set is the speaker system in
(LBT-D2220/D220CD/D259CD/A270CDM/A11/A11K/A17CD/
A17CDM)

2. WIRING DIAGRAM



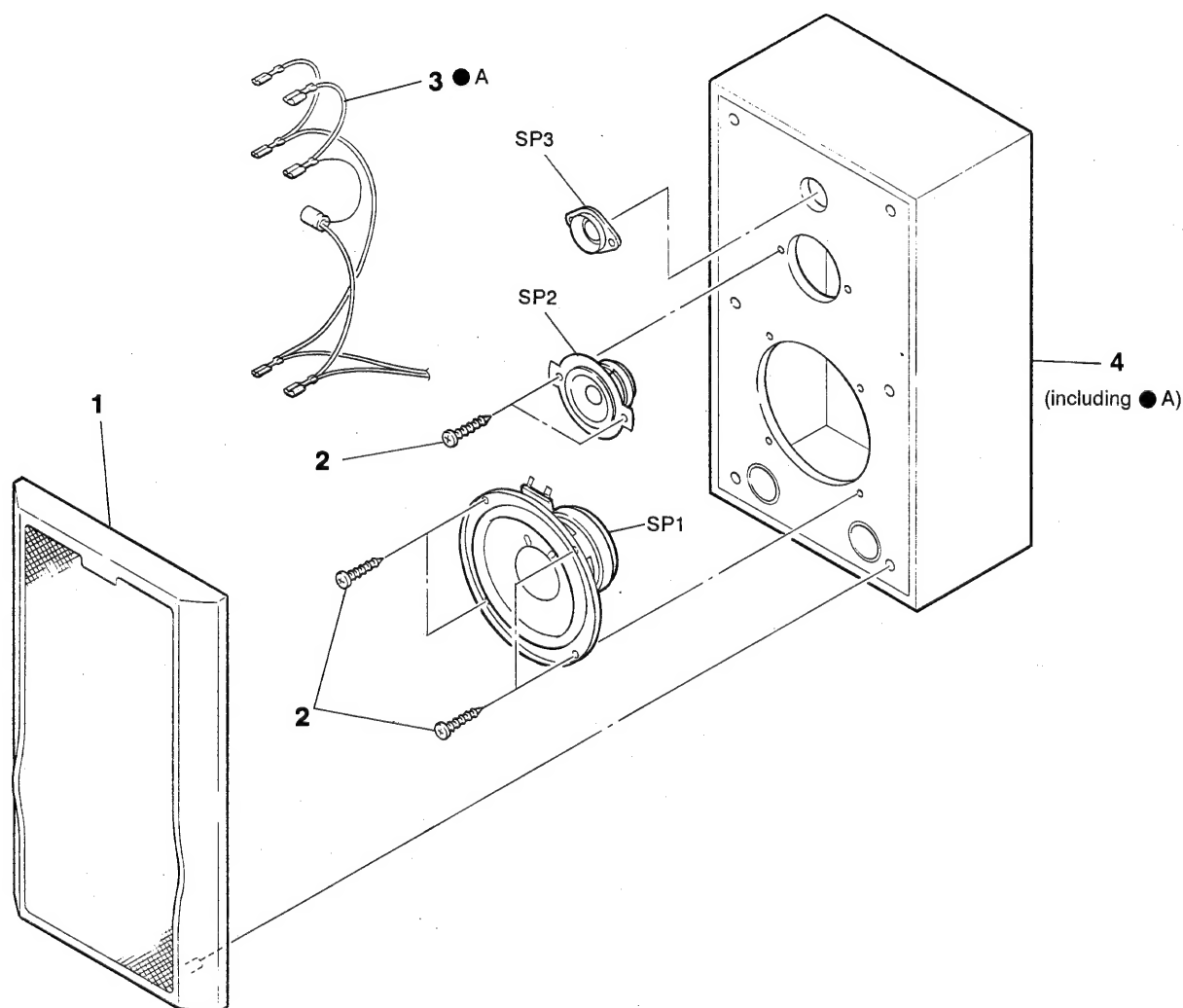
SPEAKER SYSTEM
SONY®

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)

↑
Parts color

↑
Cabinet's color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.



Ref. No.	Part No.	Description	Remark
1	X-4943-134-1	PANEL ASSY, FRONT	
2	4-874-614-61	SCREW (M3. 5x16) TAPPING	
3	1-575-696-11	CORD, SPEAKER (WITH (C))	
* 4	X-4943-135-1	CABINET ASSY, SPEAKER	
SP1	1-544-451-11	SPEAKER (16CM) (WOOFER)	
SP2	1-544-452-21	SPEAKER (6CM) (TWEETER)	
SP3	1-544-453-21	SPEAKER (2CM) (SUPER TWEETER)	